

RUSH

Access DB# 170219

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Michael Brown Examiner #: 65949 Date: 11-1-05
Art Unit: 3764 Phone Number 24972 Serial Number: 10/685776
Mail Box and Bldg/Room Location: RND Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

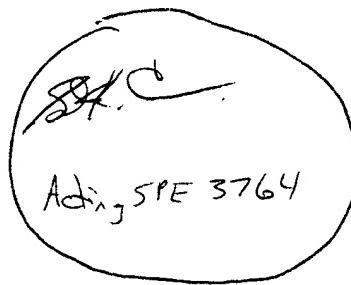
Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Method For Forming Through A Guard An Implantation Space In The Human Spine

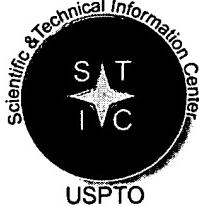
Inventors (please provide full names): Dr. Gary Michelson

Earliest Priority Filing Date: June 13, 1988

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.



STAFF USE ONLY		Type of Search	Vendors and cost where applicable
Searcher:	<u>Jeanne Hargan</u>	NA Sequence (#)	STN _____
Searcher Phone #:	<u>23529</u>	AA Sequence (#)	Dialog _____
Searcher Location:	_____	Structure (#)	Questel/Orbit _____
Date Searcher Picked Up:	_____	Bibliographic	Dr.Link _____
Date Completed:	_____	Litigation	Lexis/Nexis _____
Searcher Prep & Review Time:	_____	Fulltext	Sequence Systems _____
Clerical Prep Time:	_____	Patent Family	WWW/Internet _____
Online Time:	_____	Other	Other (specify) _____



STIC Search Report

EIC 3700

STIC Database Tracking Number: 170219

TO: Michael Brown
Location: RND 5d65
Art Unit: 3764

Pinhole Cameras 10/685776

From: Jeanne Horrigan
Location: RND 8A34
Phone: 571-272-3529

jeanne.horrigan@uspto.gov

Search Notes

Attached are the search results for the method of using a single guide for drilling and implant in spinal surgery of the disc/vertebrae.

I tagged the items I thought were most relevant, but suggest that you review ALL of the results.

Also attached is a search feedback form. Completion of the form is voluntary. Your completing this form would help us improve our search services.

I hope the attached information is useful. Please feel free to contact me if you have any questions or need additional articles on this subject.

A handwritten signature in black ink, appearing to read "J. Horrigan".



STIC Search Results Feedback Form

EIC 3700

Questions about the scope or the results of the search? Contact **the EIC searcher or contact:**

John Sims, EIC 3700 Team Leader
RND 8B35, Phone 2-3507

Voluntary Results Feedback Form

- *I am an examiner in Workgroup:* *Example: 3730*
- *Relevant prior art found, search results used as follows:*
- 102 rejection
 - 103 rejection
 - Cited as being of interest.
 - Helped examiner better understand the invention.
 - Helped examiner better understand the state of the art in their technology.

Types of relevant prior art found:

- Foreign Patent(s)
- Non-Patent Literature
(journal articles, conference proceedings, new product announcements etc.)

➤ *Relevant prior art not found:*

- Results verified the lack of relevant prior art (helped determine patentability).
- Results were not useful in determining patentability or understanding the invention.

Comments:

Drop off or send completed forms to STIC/EIC3700 RND 8B31



File 155: MEDLINE(R) 1951-2005/Nov 14
(c) format only 2005 Dialog

File 5:Biosis Previews(R) 1969-2005/Nov W1
(c) 2005 BIOSIS

File 73: EMBASE 1974-2005/Nov 15
(c) 2005 Elsevier Science B.V.

File 34: SciSearch(R) Cited Ref Sci 1990-2005/Nov W1
(c) 2005 Inst for Sci Info

File 434: SciSearch(R) Cited Ref Sci 1974-1989/Dec
(c) 1998 Inst for Sci Info

Set Items Description

S1 758353 TUBE OR TUBULAR OR TUBELIKE OR SLEEVE OR CYLINDER OR CYLINDRICAL OR HOLLOW(1W) (SHAFT OR MEMBER OR DEVICE OR INSTRUMENT - OR PASSAGE??? OR GUARD) OR GUIDE

S2 445212 DISC? ? OR DISK? ? OR VERTEBRA? ?

S3 237483 IMPLANT? ? OR BONE() PLUG? ? OR SPINAL() (FASTENER? ? OR FIXATION() DEVICE? ?)

S4 1497313 OPENING? ? OR APERTURE? ? OR SPACE OR SPACES OR HOLE OR HOLES OR CAVITY OR CAVITIES

S5 3584384 DRILL??? OR FORM OR FORMS OR FORMED OR FORMING

S6 751194 SPINE OR SPINAL

S7 314 S1 AND S2 AND S3

S8 187 S6 AND S7

S9 6281 S5(1W)S4

S10 3 S8 AND S9

S11 2 RD (unique items) [too recent]

S12 0 (S7 AND S9) NOT S10

S13 120 RD S8 (unique items)

S14 5 S13/2005

S15 14 S13/2004

S16 35 S13/2002:2003

S17 34 S13/2000:2001

S18 17 S13/1997:1999

S19 4 S13/1994:1996

S20 6 S13/1991:1993

S21 3 S13/1989:1990

S22 2 S13 NOT S14:S21

S23 3 S7 AND S9

S24 0 S23 NOT S10

S25 127 S7 NOT S8

S26 97 RD (unique items)

S27 49 S26/2000:2005

S28 22 S26/1995:1999

S29 16 S26/1989:1994

S30 10 S26 NOT S27:S29

S31 2267 S1 AND S2 AND S6

S32 254 S1/TI AND S31

S33 220 S32 NOT S7

S34 149 RD (unique items)

S35 67 S34/2000:2005

S36 18 S34/1995:1999

S37 26 S34/1989:1994

S38 38 S34 NOT S35:S37

S39 38 Sort S38/ALL/PY,A

S40 192 S1(S)S2(S)S3

S41 0 S40 NOT (S7 OR S32)

22/7/1 (Item 1 from file: 155)

DIALOG(R) File 155: MEDLINE(R)

(c) format only 2005 Dialog. All rts. reserv.

08420477 PMID: 3194791

Posterior plating of the cervical spine . A biomechanical comparison of different posterior fusion techniques.

Gill K; Paschal S; Corin J; Ashman R; Bucholz R W
Division of Orthopaedic Surgery, University of Texas Southwestern Medical Center, Dallas.

Spine (UNITED STATES) Jul 1988, 13 (7) p813-6, ISSN 0362-2436

Journal Code: 7610646

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

Posterior arthrodesis is a preferred treatment for posttraumatic instability of the cervical spine . While most surgical constructs yield predictably high rates of fusion in satisfactory alignment, certain injury patterns involving fractures of the lamina or spinous processes may preclude rigid immobilization by simple wiring techniques. Plate fixation of the posterolateral masses has been advocated for such injuries. The purpose of this biomechanical study was to test the relative stiffness provided by different posterior fusion constructs, including lateral mass plating. All testing was performed on fresh, unembalmed cadaveric spines divided into two vertebral segment units. Muscular tissue was stripped from the specimens, but all discal and ligamentous structures were preserved. Four different posterior fixation constructs were tested. These included 1) Rogers interspinous wiring, 2) Halifax laminar clamps, 3) bilateral 1/3 tubular plates on the lateral masses, using unicortical screws, and 4) bilateral 1/3 tubular plates on the lateral masses, using bicortical screws. Stiffness measurements were taken in both flexion and extension on all specimens. Yield strength and fatigue strength of the spines were not measured. It was found that 1/3 tubular plates secured with bicortical screws to the lateral masses provided the highest mean stiffness. Less stiffness was found in spines stabilized by Halifax clamps, interspinous wiring, and plates secured with unicortical screws. There was, however, no statistically significant difference in stiffness provided by any of these four implants . It was concluded that there is no advantage in plate fixation over standard fusion constructs in augmenting the stiffness of posterior fixation of the cervical spine .

Record Date Created: 19890112

Record Date Completed: 19890112

30/7/3 (Item 3 from file: 155)

DIALOG(R) File 155: MEDLINE(R)

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06101469 PMID: 7260228

Suggestions for a total elasto-dynamic intervertebral disc prosthesis.

Edeland H G

Biomaterials, medical devices, and artificial organs (UNITED STATES)
1981, 9 (1) p65-72, ISSN 0090-5488 Journal Code: 0356630

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

The essential considerations to be taken for the design of a composite elasto-dynamic intervertebral disc prosthesis (IDP) are discussed, and a disc implant, supposedly satisfying the demands for surgical and biomechanical applicability and biocompatibility, are outlined. The suggested IDP implant is composed of an elastic kernel, covered in a two-components telescoping shell, situated in a polymer slit-tube fundament, after preparation fixed to the respective vertebral bodies of the respective motion segment with bone cement. The approach to a lumbar motion segment is suggested to be by way of an abdominal and retroperitoneal incision and exploration.

Record Date Created: 19811025

Record Date Completed: 19811025

39/6/12 (Item 12 from file: 73)
00531736 EMBASE No: 1976087294
Vertebral osteotomy in tubular kyphosis
1975

39/6/16 (Item 16 from file: 155)
05951170 PMID: 7456772
[Lumbar spondylolisthesis with radicular compression symptoms; guide lines for diagnostic clarification and for conservative and surgical treatment]

Lumbale Spondylolisthesis mit Wurzelkompressionsbeschwerden; Richtlinien fur Abklarung, fur die konservative und chirurgische Behandlung.
Sep-Oct 1980

39/6/28 (Item 28 from file: 155)
07385020 PMID: 3903071
Anterior cervical interbody fusion with threaded cylindrical bone.
Nov 1985

39/7/6 (Item 6 from file: 155)
DIALOG(R) File 155: MEDLINE(R)
(c) format only 2005 Dialog. All rts. reserv.
03810874 PMID: 5016456
Lumbar diskography using a posterolateral approach with a guide .
Roberts A; Loupe J; Goldsmith J; Comeaux L; Wickstrom J
Southern medical journal (UNITED STATES) Mar 1972, 65 (3) p358-60,
ISSN 0038-4348 Journal Code: 0404522
Publishing Model Print
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed
Record Date Created: 19720613
Record Date Completed: 19720613

39/7/15 (Item 15 from file: 155)
DIALOG(R) File 155: MEDLINE(R)
(c) format only 2005 Dialog. All rts. reserv.
05182889 PMID: 615963
Self-contained tubular drill guard for anterior cervical fusion.
Solomon A; Herz D A
Neurosurgery (UNITED STATES) Sep-Oct 1977, 1 (2) p136-8, ISSN

0148-396X Journal Code: 7802914
Publishing Model Print
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed

A self-contained tubular drill guard was adapted for use in performing anterior cervical discectomies and interbody fusions. The use of this instrument eliminates steps, provides absolute safety against drilling too deeply, allows for adjustment in individual cases, provides for easy inspection of the trephine hole, permits electing the cephalocaudal angle of the drill, and gives a measurement of the ultimate depth of the trephine hole. In 171 consecutive operations only one neurological complication occurred, and total morbidity related to cervical surgery was 6% (7% morbidity was associated with surgery at the donor site). The data suggest that the technical modification herein advocated reduces the surgical complication rate.

Record Date Created: 19781018
Record Date Completed: 19781018

39/7/18 (Item 18 from file: 155)
DIALOG(R) File 155: MEDLINE(R)
(c) format only 2005 Dialog. All rts. reserv.
05681027 PMID: 7351574

A modified drill guide for the anterior cervical fusion (Cloward) procedure. Technical note.

Berry H; Horsey W J
Journal of neurosurgery (UNITED STATES) Feb 1980, 52 (2) p284-5,
ISSN 0022-3085 Journal Code: 0253357
Publishing Model Print
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed
A modified drill guide for use in the anterior cervical fusion procedure is described. This device permits an inspection of the interbody hole during the drilling process, and incorporates the additional mechanical improvements of replacement fixation points and locking rings of different diameter. These modifications have been found to simplify and improve control over the drilling component of this surgical procedure.

Record Date Created: 19800317
Record Date Completed: 19800317

39/7/20 (Item 20 from file: 155)
DIALOG(R) File 155: MEDLINE(R)
(c) format only 2005 Dialog. All rts. reserv.
05982262 PMID: 7471583
Cervical orthoses: a guide to their selection and use.
Johnson R M; Owen J R; Hart D L; Callahan R A
Clinical orthopaedics and related research (UNITED STATES) Jan-Feb 1981
(154) p34-45, ISSN 0009-921X Journal Code: 0075674
Publishing Model Print
Document type: Case Reports; Journal Article
Languages: ENGLISH
Main Citation Owner: NLM

Record type: MEDLINE; Completed

A large variety of cervical orthoses is available, but these may be divided into four basic groups. Although the orthoses in each group provide similar controls, each appliance has certain discrete advantages and limitations. The effectiveness of seven different cervical appliances in restricting motion in flexion-extension, lateral bending and rotation is presented. This information may be used to rationally select an orthosis to control specific clinical problems. A guide is formulated for selecting the orthoses for the control of various cervical injuries and postoperative problems.

Record Date Created: 19810521

Record Date Completed: 19810521

39/7/32 (Item 32 from file: 155)

DIALOG(R) File 155: MEDLINE(R)

(c) format only 2005 Dialog. All rts. reserv.

07467279 PMID: 3945475

Early rod-sleeve stabilization of the injured thoracic and lumbar spine.

Edwards C C; Levine A M

Orthopedic clinics of North America (UNITED STATES) Jan 1986, 17 (1)

p121-45, ISSN 0030-5898 Journal Code: 0254463

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

The rod- sleeve method provides adjustable corrective forces in all directions so as to accomplish anatomic alignment and three-dimensional rigid fixation for acute spinal injuries. The authors studied a prospective series of 135 consecutive cases treated with this new technique. Results showed improved indirect canal decompression and neurologic recovery, few complications, and greater maintenance of correction than previously reported.

Record Date Created: 19860319

Record Date Completed: 19860319

39/7/34 (Item 34 from file: 5)

DIALOG(R) File 5: Biosis Previews(R)

(c) 2005 BIOSIS. All rts. reserv.

0005332435 BIOSIS NO.: 198732061326

NEEDLE GUIDE APPARATUS FOR DISCOLYSIS PROCEDURES US PATENT-4638799.

JANUARY 27 1987

AUTHOR: MOORE R R (Reprint)

AUTHOR ADDRESS: 4010 EAST AVE, HAYWARD, CALIF 94545, USA**USA

JOURNAL: Official Gazette of the United States Patent and Trademark Office

Patents 1074 (4): p1916 1987

ISSN: 0098-1133

DOCUMENT TYPE: Patent

RECORD TYPE: Citation

LANGUAGE: ENGLISH

File 94:JICST-EPlus 1985-2005/Sep W2
(c) 2005 Japan Science and Tech Corp (JST)
File 95:TEME-Technology & Management 1989-2005/Oct W2
(c) 2005 FIZ TECHNIK
File 99:Wilson Appl. Sci & Tech Abs 1983-2005/Oct
(c) 2005 The HW Wilson Co.
File 144:Pascal 1973-2005/Nov W1
(c) 2005 INIST/CNRS
File 35:Dissertation Abs Online 1861-2005/Oct
(c) 2005 ProQuest Info&Learning
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(c) 2005 BLDSC all rts. reserv.
File 431:MediConf: Medical Con. & Events 1998-2004/Oct B2
(c) 2004 Dr. R. Steck
File 8:Ei Compendex(R) 1970-2005/Nov W1
(c) 2005 Elsevier Eng. Info. Inc.
File 6:NTIS 1964-2005/Nov W1
(c) 2005 NTIS, Intl Cpyrght All Rights Res
Set Items Description
S1 841320 TUBE OR TUBULAR OR TUBELIKE OR SLEEVE OR CYLINDER OR CYLINDRICAL OR HOLLOW(1W) (SHAFT OR MEMBER OR DEVICE OR INSTRUMENT - OR PASSAGE??? OR GUARD) OR GUIDE
S2 280125 DISC? ? OR DISK? ? OR VERTEBRA? ?
S3 110576 IMPLANT? ? OR BONE() PLUG? ? OR SPINAL() (FASTENER? ? OR FIXATION() DEVICE? ?)
S4 1781288 OPENING? ? OR APERTURE? ? OR SPACE OR SPACES OR HOLE OR HOLES OR CAVITY OR CAVITIES
S5 2350231 DRILL??? OR FORM OR FORMS OR FORMING OR FORMED
S6 206240 SPINE OR SPINAL
S7 71 S1 AND S2 AND S3
S8 64 RD (unique items)
S9 64 Sort S8/ALL/PY,A [not relevant]
S10 71 S1 AND S3 AND S6
S11 42 S10 NOT S7
S12 41 RD (unique items)
S13 41 Sort S12/ALL/PY,A [not relevant]

File 149:TGG Health&Wellness DB(SM) 1976-2005/Nov W1
(c) 2005 The Gale Group
File 16:Gale Group PROMT(R) 1990-2005/Nov 16
(c) 2005 The Gale Group
File 160:Gale Group PROMT(R) 1972-1989
(c) 1999 The Gale Group
File 148:Gale Group Trade & Industry DB 1976-2005/Nov 16
(c) 2005 The Gale Group
File 621:Gale Group New Prod.Annou.(R) 1985-2005/Nov 16
(c) 2005 The Gale Group
File 636:Gale Group Newsletter DB(TM) 1987-2005/Nov 16
(c) 2005 The Gale Group
File 635:Business Dateline(R) 1985-2005/Nov 15
(c) 2005 ProQuest Info&Learning
File 9:Business & Industry(R) Jul/1994-2005/Nov 15
(c) 2005 The Gale Group
File 441:ESPICOM Pharm&Med DEVICE NEWS 2005/Sep W4
(c) 2005 ESPICOM Bus.Intell.
File 98:General Sci Abs/Full-Text 1984-2004/Dec
(c) 2005 The HW Wilson Co.

Set Items Description
S1 513664 TUBE OR TUBES OR TUBULAR OR TUBELIKE OR SLEEVE OR SLEEVES -
OR CYLINDER? ? OR CYLINDRICAL
S2 1091 HOLLOW(1W) (SHAFT? ? OR MEMBER? ? OR DEVICE? ? OR INSTRUMENT? ? OR PASSAGE??? OR GUARD? ?)
S3 878610 GUIDE OR GUIDES OR CONDUIT? ? OR DUCT? ?
S4 765225 DISC? ? OR DISK? ? OR VERTEBRA? ?
S5 75458 IMPLANT? ? OR BONE() PLUG? ? OR SPINAL() (FASTENER? ? OR FIXATION() DEVICE? ?)
S6 25 SPINAL() (SCREW? ? OR NUT? ? OR STAPLE OR STAPLES)
S7 3090784 OPENING? ? OR APERTURE? ? OR SPACE OR SPACES
S8 4985051 DRILL??? OR FORM OR FORMS OR FORMED OR FORMING
S9 97 S1:S3(S)S4(S)S5:S6
S10 45 RD (unique items) [too recent]
S11 45 Sort S10/ALL/PD,A
S12 81439 SPINE OR SPINAL
S13 14323 S1:S3(S) (S4 OR S6 OR S5(S)S12)
S14 2116 S1:S3(S)S12
S15 340 S1:S3(S)S4:S5(S)S12
S16 0 S1:S3(S)S6
S17 286 S15 NOT S9
S18 208 RD (unique items)
S19 208 Sort S18/ALL/PD,A

19/7/4 (Item 4 from file: 148)

DIALOG(R) File 148:Gale Group Trade & Industry DB
(c) 2005 The Gale Group. All rts. reserv.

02045269 SUPPLIER NUMBER: 03257660 (THIS IS THE FULL TEXT)

New surgical procedure for herniated spinal disks introduced at Graduate Hospital.

PR Newswire, NYPR66

May 4, 1984

TEXT:

PHILADELPHIA, May 4 (PRNewswire) -- A surgical procedure which has dramatic implications for those who suffer the severe, sometimes crippling, pain from herniated spinal disks, has been developed and performed with apparently complete success by an orthopedic surgeon at the Graduate

Hospital, it was reported today.

The new procedure, which eliminates most post-operative illness and pain and shortens the hospital stay, was developed by Parviz Kambin of the Graduate Hospital's Department of Orthopedic Surgery. Kambin has performed the procedure on 50 patients.

Kambin reported that patients upon whom he performed "Percutaneous Lateral Diskektomy" were able to leave the hospital within two or three days after the surgery and that they experienced complete relief from the sciatica (lower back) pain associated with disk problems.

He also noted the patients did not experience post-operative bleeding and scar formation which often accompanies conventional laminectomy (disk removal) and there was no instance of reherniation after the surgery.

After administration of only local anesthesia to the patient, an incision is made to the side of the **spinal** column, thereby avoiding the need to cut through approximately two inches of muscle as is done in laminectomy. A fine **tube**, or cannula, is inserted into the incision and a cutting instrument, threaded through the cannula, is used to make a window in the annulus, a ring-shaped structure attached to the **disk**.

Fragmented disk material then is withdrawn through the window with a specially designed forceps and an aspirator (suction apparatus). Trauma associated with the procedure is so slight that the patient is able to sit up and walk the day of or the day after the surgery. Minimal post-operative back pain was experienced by the patients who underwent the surgery and this was controlled by oral medication.

Recently, a new Disc Treatment Center opened at the Graduate Hospital. The multi-disciplinary approach of the center provides the services of orthopaedists, neurosurgeons, neurologists and neuroradiologists in the diagnosis and treatment of disc disorders.

Kambin, who received his medical degree at Teheran University, has been a member of the attending staff at Graduate since 1972. He is a diplomate of the American Board of Orthopedic Surgery and holds memberships in the American Academy of Orthopedic Surgery, the International College of Surgeons and the Philadelphia and Pennsylvania Orthopedic Associations.

/CONTACT -- Tony Ryzinski of the Graduate Hospital at 215-893-2332/
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19/7/8 (Item 8 from file: 160)
DIALOG(R)File 160:Gale Group PROMT(R)
(c) 1999 The Gale Group. All rts. reserv.
01420149

Spinal disk procedure uses needlelike probe.

MEDICAL WORLD NEWS September 22, 1986 p. 33

Percutaneous diskektomy is 73% successful in treating herniated **disks**, according to G Onik of Allegheny General Hospital (Pittsburgh, Pennsylvania). A suction-and-cutting probe has been adapted from eye surgery for use as an alternative to open laminectomy. If the diskektomy is ineffective, the patient can still undergo laminectomy. The technique requires a local anesthetic. Patients help surgeons **guide** the probe by telling them if it touches a nerve. The probe is guided toward the **spine** with the aid of fluoroscopy. (CT is used beforehand to map out a course.) The probe does not violate the **spinal** canal, eliminating the risk of epidural fibrosis. The procedure has not caused any complications in the 120 patients tested so far at 14 centers.

19/7/9 (Item 9 from file: 160)

DIALOG(R) File 160:Gale Group PROMT(R)
(c) 1999 The Gale Group. All rts. reserv.
01416285

Technology digest: Herniated disc surgical instrument undergoes tests.
MODERN HEALTHCARE September 26, 1986 p. 102

Surgical Dynamics (Oakland, California) has developed a new instrument that will allow surgeons to remove a herniated **disc** in a person's **spine** through an incision that is small enough to be covered by an adhesive bandage. The instrument is currently being tested at 19 **spine** and neurosurgery centers across the US. Using the disposable probe, surgeons can cut and suction out pieces of the herniated **disc** through a 2 millimeters diameter **tube**. The procedure, called percutaneous lumbar discectomy, can be performed with the patient under a local anesthetic. In most cases, the patient can go home the same day and return to work within 2 week. Traditional treatment for a herniated **disc**, surgical removal of the **disc** through a 5-in incision in the back, requires general anesthesia and a 5-d hospital stay. The patient often cannot return to work for 6 week.

SURGICAL COMPRESSION PLATE AND DRILL GUIDE

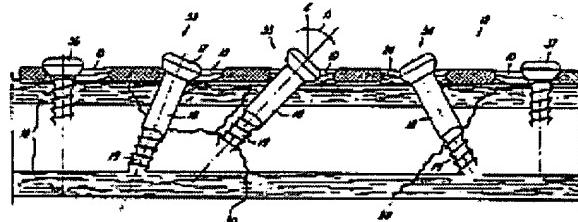
Patent number: CA1174928
Publication date: 1984-09-25
Inventor: KLAUE KAJ
Applicant: SYNTHES AG
Classification:
- **International:** A61F1/00
- **european:** A61B17/17P; A61B17/80A
Application number: CA19810390481 19811119
Priority number(s): CH19800008599 19801120

Also published as:

EP0173267 (A1)
 EP0053999 (A1)
 US4493317 (A1)
 GB2134796 (A)
 GB2134795 (A)

[more >>](#)[Report a data error here](#)**Abstract of CA1174928**

Surgical Compression Plate and Drill Guide A surgical compression plate is provided which is designed to permit the insertion of bone screws at angles up to 45.degree.. A drill guide capable of tilting to various angles, for use in connection with the novel plate is also disclosed.



Data supplied from the esp@cenet database - Worldwide

Surgical prosthetic implant

Patent number: EP0307241

Publication date: 1989-03-15

Inventor: BRANTIGAN JOHN W

Applicant: BRANTIGAN JOHN W

Classification:

- **International:** A61B17/58; A61F2/44

- **european:** A61B17/17S4; A61F2/44F2; A61F2/44F6; A61F2/46B7

Application number: EP19880308375 19880909

Priority number(s): US19870095461 19870911; US19880173928 19880328

Also published as:

EP0307241 (A3)

EP0307241 (B1)

Cited documents:

DE3505567

EP0042271

US4501269

[Report a data error here](#)

Abstract of EP0307241

Prosthetic plug implants (11,31-34,111) forming side-by-side transverse struts between adjacent vertebrae having roughened surfaces (11b,31b,32b,34d,122) receiving bone ingrowth to fuse the plugs on prepared surface sites (15,115) on opposed faces of adjacent vertebrae and have end faces (11a,31a,34a,111c) with tool receiving recesses (19,111d) securing the plug on a tool (24,120) for insertion on the prepared sites of the vertebrae and for removing the tool from the plug without disturbing its position on the sites. These sites can be prepared by feeding a drill (21) through a guide (22) fixed to posterior or anterior sides of adjacent vertebrae to form the prepared sites including cortex bone (18,118) in the opposed faces of the adjacent vertebrae and terminating the drilling in advance of the opposite sides of the vertebrae (16,116). Gauge blocks (119) may be used to stretch collapsed disc tissue (112a) between the vertebrae to reclaim normal disc space between the vertebrae. A preferred implant (111) is rectangular, has nubs, (122) on the sidewalls thereof, slots (124-125) receiving bone graft material (26) and is formed of radiolucent material.



File 350:Derwent WPIX 1963-2005/UD,UM &UP=200573
(c) 2005 Thomson Derwent
File 347:JAPIO Nov 1976-2005/Jul(Updated 051102)
(c) 2005 JPO & JAPIO

Set	Items	Description
S1	2688776	TUBE OR TUBULAR OR TUBELIKE OR SLEEVE OR CYLINDER OR CYLINDRICAL OR HOLLOW(1W) (SHAFT OR MEMBER OR DEVICE OR INSTRUMENT - OR PASSAGE??? OR GUARD) OR GUIDE
S2	674639	DISC? ? OR DISK? ? OR VERTEBRA? ?
S3	50379	IMPLANT? ? OR BONE() PLUG? ? OR SPINAL() (FASTENER? ? OR FIXATION() DEVICE? ?)
S4	6575719	DRILL??? OR FORM OR FORMS OR FORMED OR FORMING
S5	3530329	OPENING? ? OR APERTURE? ? OR SPACE OR SPACES OR HOLE OR HOLES OR CAVITY OR CAVITIES
S6	21746	SPINE OR SPINAL
S7	624	S1 AND S2 AND S3
S8	189209	S4 (2W) S5
S9	27	S7 AND S8
S10	278	S7 AND S6
S11	17	S9 AND S10 [16 too recent; 1 duplicate]
S12	10	S9 NOT S11
S13	1237115	AD=1989:1990
S14	3798799	AD=1991:1996
S15	1352178	AD=1994:1995
S16	1516847	AD=1996:1997
S17	2686605	AD=1998:2000
S18	2925452	AD=2001:2003
S19	589112	AD=2004:2005
S20	261	S10 NOT S9
S21	212	S20 NOT S13:S14
S22	215	S20 NOT S15:S16
S23	194	S20 NOT S17
S24	107	S20 NOT S18:S19
S25	197	S21 NOT S15:S16
S26	146	S25 NOT S17
S27	20	S26 NOT S18:S19
S28	7061	S1 AND S3
S29	435	S28 AND S6
S30	157	S29 NOT S9:S10
S31	135	S30 NOT S13:S14
S32	130	S31 NOT S15:S16
S33	101	S32 NOT S17
S34	26	S33 NOT S18:S19

12/34/9 (Item 9 from file: 350)

DIALOG(R)File 350:Derwent WPIX
(c) 2005 Thomson Derwent. All rts. reserv.
007366454 **Image available**
WPI Acc No: 1988-000389/198801

Implant for securing two adjacent vertebrae - is in form of tapered tube of open cell metal with solid proximal end

Patent Assignee: GRUNDEI H (GRUN-I); S & G IMPLANTS GMBH (SGIM-N)

Inventor: THOMAS W

Number of Countries: 012 Number of Patents: 006

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
DE 3620549	A	19871223	DE 3620549	A	19860619	198801 B

WO 8707827	A	19871230	WO 87DE224	A	19870514	198802
EP 271501	A	19880622	EP 87902440	A	19870514	198825
DE 3620549	C	19890316				198911
EP 271501	B	19910227				199109
DE 3768223	G	19910404				199115

Priority Applications (No Type Date) : DE 3620549 A 19860619

Cited Patents: DE 2910627; EP 42271; US 4501269

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
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DE 3620549	A		3		
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WO 8707827	A	G			
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Designated States (National) : US

Designated States (Regional) : AT BE CH DE FR GB IT LU NL SE

EP 271501	A	G			
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Designated States (Regional) : AT BE CH DE FR GB IT LI LU NL SE

EP 271501	B				
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Designated States (Regional) : AT BE CH DE FR GB IT LI LU NL SE

Abstract (Basic) : DE 3620549 A

The **implant** is in the form of a hollow, frusto-conical member with a cone angle of between 4 and 8 deg. and a wall thickness of 3 to 6 mm. Prior to insertion, retaining **cavities** are found in the **vertebrae** to be secured.

The **implant** (11) is made of metal with an open-cell structure (1) with the exception of at least the proximal end (4), which is made from a solid metal ring.

ADVANTAGE - Rigid, permanent **vertebrae** connection.

2,3/5

Abstract (Equivalent) : DE 3620549 C

The **implant** secures adjacent **vertebrae** together, being of metal and open cellular construction. The proximal end (4,5) at least of the **implant** is formed by a solid metal tube, typically a ring welded to the cellular portion. The wall thickness of the **implant** can be 3 to 6 mm. ADVANTAGE - No damage to thin cell walls by splintering while hammering home.

(3pp

Abstract (Equivalent) : EP 271501 B

Implant for securing neighbouring **vertebrae** of the spinal column which are partially worn away on the opposing surfaces for forming a receiving space for the **implant** to be driven in using a tool, the **implant** being open-cell and metallic, characterised in that at least the proximal end (4), which forms the tool operative surface, of the otherwise open-cell, cylindrical or tubular **implant** (1) has a solid construction.

(4pp

Derwent Class: P32

International Patent Class (Additional) : A61F-002/44

27/26, TI/1 (Item 1 from file: 350)

DIALOG(R) File 350:Derwent WPIX

(c) 2005 Thomson Derwent. All rts. reserv.

017196793

WPI Acc No: 2005-520420/200553

Implantable device for repair of spinal annular defects, includes scaffold comprising biodurable, resiliently compressible, elastomeric reticulated composition to obliterate tissue defects

27/26, TI/3 (Item 3 from file: 350)
DIALOG(R) File 350:Derwent WPIX
(c) 2005 Thomson Derwent. All rts. reserv.
017079172
WPI Acc No: 2005-403497/200541
Connecting device for orthopedic surgery, e.g. to connect spinal rod and vertebral screw or hook, includes extension inserted through transverse opening of receiver member to connect grommet to the receiver member

27/26, TI/5 (Item 5 from file: 350)
DIALOG(R) File 350:Derwent WPIX
(c) 2005 Thomson Derwent. All rts. reserv.
016908101
WPI Acc No: 2005-232389/200524
Interbody spacer for threaded center line cage for providing spacing to adjacent vertebrae, has cylindrical portion, defined by surface which has cylindrical shape, that is connected to converged end of conical portion

27/26, TI/7 (Item 7 from file: 350)
DIALOG(R) File 350:Derwent WPIX
(c) 2005 Thomson Derwent. All rts. reserv.
016435181
WPI Acc No: 2004-593098/200457
Surgical instrumentation system for treating disc space to be fused with spinal implants, has end plate preparation instrument that provides end plates with shape corresponding to preselected shape of opposing surface of implants

27/26, TI/8 (Item 8 from file: 350)
DIALOG(R) File 350:Derwent WPIX
(c) 2005 Thomson Derwent. All rts. reserv.
014910077
WPI Acc No: 2002-730783/200279
Adjustable intervertebral implant has groove provided in gaps between legs which dilator spreads so as to arrest dilator in predetermined location

27/26, TI/9 (Item 9 from file: 350)
DIALOG(R) File 350:Derwent WPIX
(c) 2005 Thomson Derwent. All rts. reserv.
014512937
WPI Acc No: 2002-333640/200237
Implant material for shin- vertebral fusion, comprises numerous small holes formed in biodegradable-absorbable polymer containing cylinder, and non-porous bands provided along periphery of cylinder

27/26, TI/11 (Item 11 from file: 350)
DIALOG(R) File 350:Derwent WPIX
(c) 2005 Thomson Derwent. All rts. reserv.
013640997
WPI Acc No: 2001-125205/200114
Implant for insertion between two vertebrae has support elements and a longitudinal hollow space with an outer wall of a tubing of densely woven textile material

27/26, TI/12 (Item 12 from file: 350)
DIALOG(R) File 350:Derwent WPIX
(c) 2005 Thomson Derwent. All rts. reserv.

013609114

WPI Acc No: 2001-093322/200111

Cylindrical metal implant for insertion between two vertebrae in the spinal column can be opened in various directions to stimulate cell growth and fusion

27/26, TI/13 (Item 13 from file: 350)

DIALOG(R) File 350:Derwent WPIX

(c) 2005 Thomson Derwent. All rts. reserv.

012042371

WPI Acc No: 1998-459281/199840

Spinal osteosynthesis implant - has rod insert channel offset relative to axis of threaded section

27/26, TI/15 (Item 15 from file: 350)

DIALOG(R) File 350:Derwent WPIX

(c) 2005 Thomson Derwent. All rts. reserv.

008292816

WPI Acc No: 1990-179817/199024

Surgical implant for correcting spinal column - incorporates screwed tube to force adjacent vertebrae apart

27/26, TI/16 (Item 16 from file: 350)

DIALOG(R) File 350:Derwent WPIX

(c) 2005 Thomson Derwent. All rts. reserv.

007595701

WPI Acc No: 1988-229633/198833

Articulated shoulder joint prosthesis - has rod with ball end fitting into sleeve in humerus and engaging with socket in shoulder blade

27/26, TI/17 (Item 17 from file: 350)

DIALOG(R) File 350:Derwent WPIX

(c) 2005 Thomson Derwent. All rts. reserv.

004285390

WPI Acc No: 1985-112268/198519

Dynamic correction of spinal deformation - uses implanted elastic rod constantly pulling spine into shape and secured to vertebrae by retaining clamps

27/26, TI/19 (Item 19 from file: 350)

DIALOG(R) File 350:Derwent WPIX

(c) 2005 Thomson Derwent. All rts. reserv.

003277445

WPI Acc No: 1982-C5430E/198210

Bar implant for surgical scoliosis treatment - has hook secured to bar by friction and engaging vertebrae

27/34/14 (Item 14 from file: 350)

DIALOG(R) File 350:Derwent WPIX

(c) 2005 Thomson Derwent. All rts. reserv.

008308760 **Image available**

WPI Acc No: 1990-195761/199026

Instrumentation for spinal fusion - has implantable end and external shaft fixation using sleeve and screw technique

Patent Assignee: BEURIER J (BEUR-I)

Inventor: BEURIER J

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
FR 2638632	A	19900511	FR 8814592	A	19881108	199026 B

Priority Applications (No Type Date): FR 8814592 A 19881108

Abstract (Basic): FR 2638632 A

The **implant** proper (1) is fixed into **vertebrae** or sacrum while the open end (2) accommodates a **sleeve** (9) with a securing screw (10) which immobilises the connecting **shaft** (8). The **sleeve** is either a complete or a half **cylinder** and its diameter fits the one of the **shaft** over through which it fits.

The **sleeve** can receive more securing screws, allowing stronger **fixation** of the **shaft** and more **implant** parts could be used to cover various distances.

USE/ADVANTAGE - For orthopaedic surgery such as **spinal fusion**. Provides strong and reliable **fixation** without compromising the **implant**.

Dwg.5/5

Derwent Class: P32

International Patent Class (Additional): A61F-002/44

27/34/18 (Item 18 from file: 350)

DIALOG(R) File 350:Derwent WPIX

(c) 2005 Thomson Derwent. All rts. reserv.

003654722

WPI Acc No: 1983-14704K/198306

Surgically implanted spinal fixation rod - with tubular sleeves engaging selected vertebrae to straighten spine

Patent Assignee: EDWARDS C C (EDWA-I)

Inventor: EDWARDS C C

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 4369769	A	19830125				198306 B

Priority Applications (No Type Date): US 80159396 A 19800613

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

US 4369769 A 8

Abstract (Basic): US 4369769 A

Surgically **implanted support** includes a rod which is anchored to parts of the **spine**. The rod carries **tubular spacers** of dia. about 4mm greater than that of the rod. During surgery the rod can be tensioned and the **sleeves** slid to contact selected parts of the **spine**.

Pref. the **sleeves** are supplied with a variety of dia. to provide different displacements to the **spine**. Pref. the **sleeves** are made from high density polyethylene, carbon or metal covered with carbon or plastic.

The **sleeves** are used in conjunction with a Harrington rod for either compression or distraction of the **spine** and allow individual **vertebrae** to be aligned. Provision of **sleeves** of varying diameters and lengths eliminates the use of Harrington rods of differing deg of curvature.

2

Derwent Class: A96; D22; P32

International Patent Class (Additional): A61F-005/01

27/34/20 (Item 20 from file: 350)

DIALOG(R) File 350:Derwent WPIX
(c) 2005 Thomson Derwent. All rts. reserv.
002180686

WPI Acc No: 1979-L0637B/197948

Spinal implant fitting between vertebrae - has actuator pulling or thrusting between anchoring components secured to vertebrae

Patent Assignee: GEBR SULZER AG (SULZ)

Inventor: NEUGEBAUER H

Number of Countries: 003 Number of Patents: 004

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
DE 2821678	A	19791122				197948 B
DE 2821678	B	19800430				198019
CH 628803	A	19820331				198215
AT 7803575	A	19820615				198227

Priority Applications (No Type Date): CH 785178 A 19780512

Abstract (Basic): DE 2821678 A

The spinal implant fits between adjacent vertebrae in order to treat spinal curvature, particularly scoliosis and/or kyphosis. One or more supporting or anchoring components (4) are secured to a vertebra or a protrusion from the latter.

An actuator (5) in two or more parts is mounted between adjacent anchoring components, the parts being movable relative to each other and thus pulling the anchoring components together or thrusting them apart. The actuator can be a plug, sliding axially in a sleeve under the action of a tension or compression.

Derwent Class: P32

International Patent Class (Additional): A61F-001/00; A61F-005/00

34/26,TI/1 (Item 1 from file: 350)

DIALOG(R) File 350:Derwent WPIX
(c) 2005 Thomson Derwent. All rts. reserv.
017230931

WPI Acc No: 2005-554556/200556

Medical implant e.g. hook, closure for spinal implant system, has rim stop on break-off portion to prohibit engagement of removal head by driving tool that engages driving head, where removal head removes closure from implant

34/26,TI/2 (Item 2 from file: 350)

DIALOG(R) File 350:Derwent WPIX
(c) 2005 Thomson Derwent. All rts. reserv.
017142235

WPI Acc No: 2005-466580/200547

Torque limiting driver for orthopedic implant component, has cam in handle assembly interior, made to cooperate with cam finger to provide first level of torque to component driver shaft when handle assembly is rotated in first direction

34/26,TI/4 (Item 4 from file: 350)

DIALOG(R) File 350:Derwent WPIX
(c) 2005 Thomson Derwent. All rts. reserv.
016921103

WPI Acc No: 2005-245413/200526

Knee unicompartmental or total prosthesis installing device, has tibial telescopic plate for verification of tibial mechanical axis, and jig or

virtual condylar implant applied on posterior cut to allow distal cutting of condyle

34/26, TI/5 (Item 5 from file: 350)
DIALOG(R) File 350:Derwent WPIX
(c) 2005 Thomson Derwent. All rts. reserv.
016857246
WPI Acc No: 2005-181528/200519
Polaxial bone screw for implantation in bone, has retainer ring with capture structure to operably receive and capture shank capture end and spherical surface that operably seats in head cavity partial spherical shaped surface

34/26, TI/6 (Item 6 from file: 350)
DIALOG(R) File 350:Derwent WPIX
(c) 2005 Thomson Derwent. All rts. reserv.
016723589
WPI Acc No: 2005-047864/200505
Spacer tube for fusion spinal implant , includes end cap supporting structure which is provided on inside wall

34/26, TI/7 (Item 7 from file: 350)
DIALOG(R) File 350:Derwent WPIX
(c) 2005 Thomson Derwent. All rts. reserv.
016572282
WPI Acc No: 2004-731018/200472
Pedicle screw and laminar hook clamping device, has clip including hole and two side axles sliding in respective slots of cylindrical part and taking respective circular cavities as axes to crimp spinal cord by simple rotation

34/26, TI/8 (Item 8 from file: 350)
DIALOG(R) File 350:Derwent WPIX
(c) 2005 Thomson Derwent. All rts. reserv.
016531611
WPI Acc No: 2004-690177/200467
Implant for promoting axon regeneration, has bio-resorbable tube which is completely filled with nerve regeneration-promoting three-dimensional bio-resorbable matrix

34/26, TI/10 (Item 10 from file: 350)
DIALOG(R) File 350:Derwent WPIX
(c) 2005 Thomson Derwent. All rts. reserv.
014582222
WPI Acc No: 2002-402926/200243
Closure for open ended medical implant e.g. bone screw, used in spinal surgery, has truncated cylindrical plug having opposing sectors whose radial outer surface define discontinuous threads

34/26, TI/11 (Item 11 from file: 350)
DIALOG(R) File 350:Derwent WPIX
(c) 2005 Thomson Derwent. All rts. reserv.
014100318
WPI Acc No: 2001-584532/200166
Instrument for gripping and manipulating an implant used e.g. in spinal osteosynthesis has curved gripping projection which chamfered edges

34/26, TI/12 (Item 12 from file: 350)

DIALOG(R) File 350:Derwent WPIX
(c) 2005 Thomson Derwent. All rts. reserv.
014005705

WPI Acc No: 2001-489919/200154

Pedicle screw for spinal implants takes round bar whose longitudinally rotating shoe notchably accepts notch-legged clip for bar.

34/26, TI/14 (Item 14 from file: 350)

DIALOG(R) File 350:Derwent WPIX
(c) 2005 Thomson Derwent. All rts. reserv.
012720244

WPI Acc No: 1999-526356/199944

Variable angle connector for spinal implant system

34/26, TI/16 (Item 16 from file: 350)

DIALOG(R) File 350:Derwent WPIX
(c) 2005 Thomson Derwent. All rts. reserv.
012217168

WPI Acc No: 1999-023274/199902

Surgical cutting instrument for severing rod-shaped surgically-implanted component in situ - has depth gauge secured to strap attached across set of surgical cutting jaws, gauge having U-shaped guide at one end which extends into cutting area defined by cutting blades of jaws, U-shaped guide encompassing rod in use

34/26, TI/17 (Item 17 from file: 350)

DIALOG(R) File 350:Derwent WPIX
(c) 2005 Thomson Derwent. All rts. reserv.
009187708

WPI Acc No: 1992-315147/199238

Tool for implantable neural electrode - comprises single structure electrode with outer substrate of semi-rigid body-tissue compatible insulating material with central spine from which number of fingers extend orthogonally to contact nerve

34/26, TI/18 (Item 18 from file: 350)

DIALOG(R) File 350:Derwent WPIX
(c) 2005 Thomson Derwent. All rts. reserv.
008985927

WPI Acc No: 1992-113196/199214

Expandable cross-section implantable neural electrode - with series of fingers which extend orthogonally from centre spine to encompass hollow cylinder

34/26, TI/19 (Item 19 from file: 350)

DIALOG(R) File 350:Derwent WPIX
(c) 2005 Thomson Derwent. All rts. reserv.
007639041

WPI Acc No: 1988-272973/198839

Implant for operative correction of spinal deformity - comprises distraction and compression rod with end provided with circumferential saw notches conically broadening towards top

34/26, TI/20 (Item 20 from file: 350)

DIALOG(R) File 350:Derwent WPIX
(c) 2005 Thomson Derwent. All rts. reserv.
007487374

WPI Acc No: 1988-121307/198818

Catheter implant mouthpiece with replaceable silicone rubber cover -
for ease and speed of use by patient to exclude contamination

34/26, TI/21 (Item 21 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2005 Thomson Derwent. All rts. reserv.

004842653

WPI Acc No: 1986-345994/198652

X-ray readable implantable pressure sensor - provides viewable shifting
of radiopaque device in response to pressure change

34/26, TI/22 (Item 22 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2005 Thomson Derwent. All rts. reserv.

004410925

WPI Acc No: 1985-237803/198539

Spinal curvature correction implant - has sliding clamp on bar with
plate spring combinations

34/26, TI/23 (Item 23 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2005 Thomson Derwent. All rts. reserv.

004150669

WPI Acc No: 1984-296208/198448

Cutter for craniotomy flap removal - has core drill with diamond surface
oscillated by eccentric drive

34/26, TI/24 (Item 24 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2005 Thomson Derwent. All rts. reserv.

003679787

WPI Acc No: 1983-39758K/198317

Surgical implants coated with a fibrogenic enzyme - pref. covalently
bonded to a polyurethane surface on the implant

34/26, TI/26 (Item 26 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2005 Thomson Derwent. All rts. reserv.

001539286

WPI Acc No: 1976-L2231X/197647

Surgical implant correcting curvature of spine - having prongs with
connecting bridge and cable holder as integral titanium part

File 349:PCT FULLTEXT 1979-2005/UB=20051110,UT=20051103

(c) 2005 WIPO/Univentio

Set	Items	Description
S1	333796	TUBE OR TUBES OR TUBULAR OR TUBELIKE OR SLEEVE OR SLEEVES - OR CYLINDER? ? OR CYLINDRICAL
S2	7593	HOLLOW(1W) (SHAFT? ? OR MEMBER? ? OR DEVICE? ? OR INSTRUMENT? ? OR PASSAGE??? OR GUARD? ?)
S3	209119	GUIDE OR GUIDES OR CONDUIT? ? OR DUCT? ?
S4	139096	DISC? ? OR DISK? ? OR VERTEBRA? ?
S5	32796	IMPLANT? ? OR BONE() PLUG? ? OR SPINAL() (FASTENER? ? OR FIX- ATION() DEVICE? ?)
S6	44	SPINAL() (SCREW? ? OR NUT? ? OR STAPLE OR STAPLES)
S7	831631	DRILL??? OR FORM OR FORMS OR FORMED OR FORMING
S8	387919	OPENING? ? OR APERTURE? ? OR SPACE OR SPACES
S9	5688	S1:S3(5W) S4
S10	143	S5:S6(S) S9
S11	53424	AD=1989:1991
S12	260030	AD=1992:1999
S13	189163	AD=1997:1999
S14	295534	AD=2000:2002
S15	144688	AD=2004:2005
S16	18	S10 NOT S11:S15 [not relevant]
S17	41	AU='MICHELSON GARY K' OR AU='MICHELSON GARY KARLIN'
S18	18	S16 NOT S17
S19	141330	GUIDE OR GUIDES OR GUARD? ?
S20	35816	DRILL???
S21	33	S20()S19(S)4(S)S5:S6
S22	434	S20()S19
S23	25	S22(S)S4(S)S5:S6
S24	1	S23 NOT S11:S15 [too recent]
S25	24	S23 NOT (S16 OR S24)
S26	117	S10 NOT (S16 OR S23)

File 350:Derwent WPIX 1963-2005/UD, UM &UP=200573
(c) 2005 Thomson Derwent

File 349:PCT FULLTEXT 1979-2005/UB=20051110, UT=20051103
(c) 2005 WIPO/Univentio

File 348:EUROPEAN PATENTS 1978-2005/Nov W01
(c) 2005 European Patent Office

Set Items Description

S1 228 AU='MICHELSON G' OR AU='MICHELSON G K' OR AU='MICHELSON G K V' OR AU='MICHELSON GARY K' OR AU='MICHELSON GARY KARLIN'

S2 78763 SPINE OR SPINAL OR VERTEBRA?

S3 185 S1 AND S2

S4 137193 THROUGH(2W) (GUARD OR TUBE OR TUBULAR OR TUBELIKE OR PIPE OR PIPET OR TUBELIKE)

S5 37 S3 AND S4

S6 1937377 METHOD? ?/TI

S7 11 S5 AND S6

S8 11 IDPAT (sorted in duplicate/non-duplicate order)

S9 26 S5 NOT S7

8/3,AB,IC/1 (Item 1 from file: 350)

DIALOG(R) File 350:Derwent WPIX
(c) 2005 Thomson Derwent. All rts. reserv.
013843231

WPI Acc No: 2001-327444/200134

XRXPX Acc No: N01-235522

Adjacent vertebrae preparing method for spinal disc surgery, involves inserting implant, whose height is greater than normal height of disc space, through hollow guard and into opening

Patent Assignee: SOFAMOR DANEK HOLDINGS INC (SOFA-N)

Inventor: MICHELSON G K

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 6224595	B1	20010501	US 9862749	A	19980420	200134 B

Priority Applications (No Type Date): US 9862749 A 19980420

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

US 6224595 B1 18 A61B-017/56

Abstract (Basic): US 6224595 B1

Abstract (Basic):

NOVELTY - A bone from an adjacent **vertebrae** (V) is removed through a hollow **guard** to form an opening across a disc space and into a portion of each **vertebrae**. A cylindrical implant (50), whose height is greater than the normal height of the disc space, is inserted through the hollow **guard** and into the opening.

USE - For placing artificial fusion implant into intervertebral space left after removal of damaged **spinal** disc.

ADVANTAGE - Increases speed and improves safety of one-stage discectomy, fusion and interbody internal **spinal** fixation.

DESCRIPTION OF DRAWING(S) - The figure shows the sectional view of driver and implant between **vertebrae**.

Cylindrical implant (50)

Vertebrae (V)

pp; 18 DwgNo 4D/5

International Patent Class (Main): A61B-017/56

8/3,AB,IC/2 (Item 2 from file: 350)
DIALOG(R) File 350:Derwent WPIX
(c) 2005 Thomson Derwent. All rts. reserv.
010590012
WPI Acc No: 1996-086965/199609
Related WPI Acc No: 1990-022365; 1995-036040; 1995-351181; 1996-414238;
1996-425184; 1996-433395
XRPX Acc No: N96-072997
Method for inserting spinal implant between two adjacent vertebra -
involves inserting distractor in disc space by using drill which can be
passed through hollow sleeve and inserting vertebra through tubular
member

Patent Assignee: MICHELSON G K (MICH-I)

Inventor: MICHELSON G K

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 5484437	A	19960116	US 88205935	A	19880613	199609 B
			US 91698674	A	19910510	
			US 9374781	A	19930610	

Priority Applications (No Type Date): US 91698674 A 19910510; US 88205935 A
19880613; US 9374781 A 19930610

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 5484437	A	41	A61B-017/56	CIP of application US 88205935
				Div ex application US 91698674
				CIP of patent US 5015247

Abstract (Basic): US 5484437 A

The method comprises inserting a spinal distractor in the disc space on one or both sides of the spinal column to provide for proper spacing of the disc space between the vertebra. Then inserting over the spinal distractor a hollow tubular member having engagement means for engaging two adjacent vertebrae into the vertebrae.

The removing the spinal distractor from the hollow tubular member, and passing a drill through the tubular member to drill a hole in the disc and a portion of the two adjacent vertebrae, removing the drill, then inserting an implant in the vertebrae through the tubular member, and finally removing the tubular member.

ADVANTAGE - Other forms of implants may be used with the present method. For example, dowels, made from bone or artificial materials, knurled or irregularly shaped cylinders or spheres, or any other shaped implants that can be introduced through the outer sleeve may be used. Being able to perform the procedure through the outer sleeve permits the procedure to be performed safely and quickly, and more accurately.

Dwg.11A/18

International Patent Class (Main): A61B-017/56

International Patent Class (Additional): A61B-017/00

8/3,AB,IC/3 (Item 3 from file: 348)
DIALOG(R) File 348:EUROPEAN PATENTS
(c) 2005 European Patent Office. All rts. reserv.
01634636
Apparatus and method of inserting spinal implants
Gerat zum Einsetzen von Ruckenwirbelimplantaten
Appareil et procede d'insertion d'implants spinaux
PATENT ASSIGNEE:

Gary Karlin Michelson, (4293910), 438 Sherman Canal, Venice, California 90291, (US), (Applicant designated States: all)

INVENTOR:

Micelson, Gary Karlin , 13140 Boca De Canon Lane, Los Angeles, CA 90049 , (US)

LEGAL REPRESENTATIVE:

Viering, Jentschura & Partner (100648), Patent- und Rechtsanwalte, Steinsdorfstr. 6, 80538 Munchen, (DE)

PATENT (CC, No, Kind, Date): EP 1346695 A1 030924 (Basic)

APPLICATION (CC, No, Date): EP 2003014398 960226;

PRIORITY (CC, No, Date): US 396414 950227

DESIGNATED STATES: AT; BE; CH; DE; DK; ES; FR; GB; GR; IE; IT; LI; LU; MC; NL; PT; SE

RELATED PARENT NUMBER(S) - PN (AN):

EP 1129668 (EP 2001114044)

EP 812167 (EP 2096907088)

INTERNATIONAL PATENT CLASS: A61B-017/17; A61F-002/46

ABSTRACT EP 1346695 A1

A guarded sleeve system for use in human spinal surgery across the height of a disc space between two adjacent vertebral bodies, comprising: an outer sleeve having an opening for providing protected access to the disc space and at least portions of the adjacent vertebral bodies; and

at least one extended portion extending from the outer sleeve for insertion into the disc space between the adjacent vertebral bodies, said at least one extended portion having a portion for bearing against each of the adjacent endplates of the adjacent vertebral bodies, said portion of said at least one extended portion having upper and lower surfaces adapted to contact the respective endplates of the adjacent vertebral bodies for properly aligning and distancing apart the adjacent vertebral bodies.

ABSTRACT WORD COUNT: 127

NOTE:

Figure number on first page: 1

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200339	1426
SPEC A	(English)	200339	23327
Total word count - document A			24753
Total word count - document B			0
Total word count - documents A + B			24753

8/3,AB,IC/4 (Item 4 from file: 349)

DIALOG(R) File 349:PCT FULLTEXT

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00936197

DYNAMIC LORDOTIC GUARD WITH MOVABLE EXTENSIONS FOR CREATING AN IMPLANTATION SPACE POSTERIORLY IN THE LUMBAR SPINE AND METHOD FOR USE THEREOF PROTECTION LORDOTIQUE DYNAMIQUE A RALLONGES MOBILES PERMETTANT DE CREER UN ESPACE D'IMPLANTATION VERS L'ARRIERE DE LA COLONNE LOMBAIRE ET SON PROCEDE D'UTILISATION

Patent Applicant/Inventor:

MICHELSON Gary K , 438 Sherman Canal, Venice, CA 92091, US, US (Residence), US (Nationality)

Legal Representative:

FLESHNER Mark L (et al) (agent), Fleshner & Kim, LLP, P.O. Box 221200,
Chantilly, VA 20152-1200, US,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200269891 A2-A3 20020912 (WO 0269891)

Application: WO 2002US6021 20020301 (PCT/WO US02006021)

Priority Application: US 2001272381 20010301; US 2001272382 20010301

Designated States:

(Protection type is "patent" unless otherwise stated - for applications prior to 2004)

AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ
EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR
LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI
SK SL TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW
(EA) AM AZ BY KG KZ MD RU TJ TM

Main International Patent Class: A61B-017/56

Publication Language: English

Filing Language: English

Fulltext Word Count: 13526

English Abstract

A lordotic guard (100) and method for guiding a bone removal device to form an implantation space in the human spine and, if desired, for inserting a spinal implant into the implantation space.

8/3,AB,IC/5 (Item 5 from file: 349)

DIALOG(R) File 349:PCT FULLTEXT

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00928595

**INSTRUMENTATION AND METHOD FOR INSERTING AND DEPLOYING AN EXPANDABLE
INTERBODY SPINAL FUSION IMPLANT**

**INSTRUMENTS ET TECHNIQUE PERMETTANT D'INTRODUIRE ET DE DEPLOYER UN IMPLANT
DE FUSION INTERVERTEBRAL DEPLOYABLE**

Patent Applicant/Inventor:

MICHELSON Gary K, 438 Sherman Canal, Venice, CA 90291, US, US
(Residence), US (Nationality)

Legal Representative:

FLESHNER Mark L (et al) (agent), Fleshner & Kim, LLP, P.O. Box 221200,
Chantilly, VA 20153-1200, US,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200262272 A2-A3 20020815 (WO 0262272)

Application: WO 2002US2810 20020204 (PCT/WO US0202810)

Priority Application: US 2001266426 20010204; US 2001277890 20010321

Designated States:

(Protection type is "patent" unless otherwise stated - for applications prior to 2004)

AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ
EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR
LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI
SK SL TJ TM TN TR TT TZ UA UG UZ VN YU ZA ZM ZW
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW
(EA) AM AZ BY KG KZ MD RU TJ TM

Main International Patent Class: A61F-002/32

Publication Language: English

Filing Language: English

Fulltext Word Count: 20089

English Abstract

This invention is an implant holder (500) for inserting a **spinal** implant into a disc space. The implant holder (500) has a shaft (502) and an outer sleeve (504). Shaft (502) has a distal end (506), a proximal end (508), a reduced portion (510) extending towards distal end (506), an intermediate reduced portion (511), and an enlarged portion (512) between intermediate reduced portion (511) and proximal end (508). Shaft (502) is preferably hollow and is adapted to permit the passage of other instruments therethrough. Outer sleeve (504) has a distal end (522) and proximal end (524). Distal end (522) has upper and lower extensions (526, 528), and side extensions (530) adapted to cooperatively engage trailing end (104) of implant (100). Side extensions (530) each have a flange (532) to cooperatively engage slot (126) of implant (100) and a stop (534) for limiting further advancement of implant holder (500) into trailing end (104) of implant (100). A method for inserting a **spinal** implant into an implantation space using the implant holder (500) is disclosed.

8/3,AB,IC/6 (Item 6 from file: 349)

DIALOG(R) File 349:PCT FULLTEXT

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00729911

INSTRUMENT AND METHOD FOR CREATING AN INTERVERTEBRAL SPACE FOR RECEIVING AN IMPLANT

INSTRUMENT ET PROCEDE DE CREATION D'UN ESPACE INTERVERTEBRAL DESTINE A RECEVOIR UN IMPLANT

Patent Applicant/Inventor:

MICHELSON Gary K , 438 Sherman Canal, Venice, CA 90291, US, US
(Residence), US (Nationality)

Legal Representative:

WESOLOWSKI Carl R (agent), Fleshner & Kim, LLP, P.O. Box 221200,
Chantilly, VA 20153-1200, US,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200042898 A2-A3 20000727 (WO 0042898)

Application: WO 2000US1821 20000125 (PCT/WO US0001821)

Priority Application: US 99117039 19990125

Designated States:

(Protection type is "patent" unless otherwise stated - for applications prior to 2004)

AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZA ZW

(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE

(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG

(AP) GH GM KE LS MW SD SL SZ TZ UG ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Main International Patent Class: A61B-017/58

Publication Language: English

Filing Language: English

Fulltext Word Count: 16004

English Abstract

A surgical instrument set for use in **spinal** surgery for forming a

substantially quadrilateral space in the **spine** for implanting a **spinal** implant at least in part into, at least in part across a disc space between adjacent **vertebral** bodies, and methods of use, are disclosed. The instrument set includes an extended guard (170) for providing protected access to the disc space, and the adjacent surfaces of the adjacent **vertebral** bodies, a guide (190) insertable into the guard (170), and a bone removal device (210) insertable into the guide (190).

8/3,AB,IC/7 (Item 7 from file: 349)

DIALOG(R) File 349:PCT FULLTEXT

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00562334

SELF-BROACHING, ROTATABLE, PUSH-IN INTERBODY FUSION IMPLANT AND METHOD FOR DEPLOYMENT THEREOF
IMPLANT D'ARTHRODESE ROTATIF A EMBOITEMENT ET BROCHAGE AUTOMATIQUE, ET PROCEDE DE DEPLOIEMENT DE L'IMPLANT

Patent Applicant/Assignee:

MICHELSON Gary K,

Inventor(s):

MICHELSON Gary K

Patent and Priority Information (Country, Number, Date):

Patent: WO 200025707 A1 20000511 (WO 0025707)

Application: WO 99US25292 19991029 (PCT/WO US9925292)

Priority Application: US 98106216 19981030

Designated States:

(Protection type is "patent" unless otherwise stated - for applications prior to 2004)

AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZA ZW GH GM KE LS MW SD SL TZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG

Main International Patent Class: A61F-002/44

Publication Language: English

Fulltext Word Count: 14840

English Abstract

An interbody **spinal** fusion implant (20) for insertion across a disc space between adjacent **vertebral** bodies of a human **spine** has a body (22) two top side and two bottom side junctions, with at least a pair of diagonally opposed junctions having a distance therebetween that does not significantly exceed the implant body height. The implant (20) also includes one or more bone penetrating protrusions (36) extending outwardly from at least the upper and lower walls of the implant. The implant (20) is inserted on its side (28, 28') between adjacent **vertebral** bodies and then rotated 90 degrees into place. The protrusions (36) penetrate the endplates upon rotation, thereby securing the implant (36) within the **spine**. The implant (20) has at least one passage (38, 38') therethrough from the upper wall (30) to the lower wall (30') to promote fusion through the implant (20). Because of the specialized opposed junctions overdistraction between the adjacent **vertebral** bodies is avoided when the implant (20) is rotated from an initial insertion position to a final deployed position.

8/3,AB,IC/8 (Item 8 from file: 349)

DIALOG(R) File 349:PCT FULLTEXT
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00413741
**MILLING INSTRUMENTATION AND METHOD FOR PREPARING A SPACE BETWEEN ADJACENT
VERTEBRAL BODIES**
INSTRUMENTS DE MEULAGE ET PROCEDE DE PREPARATION D'UN ESPACE INTERVERTEBRALE
Patent Applicant/Assignee:
MICHELSON Gary K,
Inventor(s):
MICHELSON Gary K
Patent and Priority Information (Country, Number, Date):
Patent: WO 9804202 A1 19980205
Application: WO 97US12956 19970731 (PCT/WO US9712956)
Priority Application: US 96688758 19960731
Designated States:
(Protection type is "patent" unless otherwise stated - for applications
prior to 2004)

AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH HU
IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL
PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ VN YU ZW GH KE LS MW SD
SZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH DE DK ES FI FR GB GR IE IT
LU MC NL PT SE BF BJ CF CG CI CM GA GN ML MR NE SN TD TG
Main International Patent Class: A61B-017/56
Publication Language: English
Fulltext Word Count: 18783
English Abstract
An apparatus and method for placing adjacent **vertebrae** at a fixed distance and angular relationship relative to each other, fixing the **vertebrae** in the position by use of a milling block (100) engaging each of the adjacent **vertebrae**, and then using a milling instrument (200), the depth, length and excursion of which from side to side are controlled by the apparatus to machine out a defined thickness of bone and a space of defined length, height, width and shape in preparation for receiving an inter-body **spinal** implant of graft or known size and configuration, are disclosed.

8/3, AB, IC/9 (Item 9 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
(c) 2005 WIPO/Univentio. All rts. reserv.
00344832
APPARTUS AND METHOD OF INSERTING SPINAL IMPLANTS
APPAREIL ET PROCEDE POUR PLACER DES IMPLANTS SPINAUX
Patent Applicant/Assignee:
MICHELSON Gary Karlin,
Inventor(s):
MICHELSON Gary Karlin
Patent and Priority Information (Country, Number, Date):
Patent: WO 9627345 A2 19960912
Application: WO 96US2377 19960226 (PCT/WO US9602377)
Priority Application: US 95396414 19950227
Designated States:
(Protection type is "patent" unless otherwise stated - for applications prior to 2004)
AL AM AT AU AZ BB BG BR BY CA CH CN CZ DE DK EE ES FI GB GE HU IS JP KE
KG KP KR KZ LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE

TM AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA
GN ML MR NE SN TD TG

Main International Patent Class: A61F-000/00

Publication Language: English

Fulltext Word Count: 27100

English Abstract

Apparatus and a method of inserting **spinal** implants is disclosed in which an intervertebral space is first distracted, a hollow sleeve having teeth at one end is then driven into the **vertebrae** adjacent that disc space. A drill is then passed through the hollow sleeve removing disc and bone in preparation for receiving the **spinal** implant which is then inserted through the sleeve. Apparatus and a method of inserting **spinal** implants is disclosed in which an intervertebral space is first distracted to restore the normal angular relationship of the **vertebrae** adjacent to that disc space. An extended outer sleeve having extended portions capable of maintaining the **vertebrae** distracted in their normal angular relationship is then driven into the **vertebrae** adjacent that disc space. A drill is then passed through the hollow sleeve removing disc and bone in preparation for receiving the **spinal** implant which is then inserted through the sleeve.

8/3,AB,IC/10 (Item 10 from file: 349)

DIALOG(R) File 349:PCT FULLTEXT

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00344808

IMPROVED METHODS AND INSTRUMENTATION FOR THE SURGICAL CORRECTION OF HUMAN THORACIC AND LUMBAR SPINAL DISEASE FROM THE LATERAL ASPECT OF THE SPINE

PROCEDES AMELIORES POUR EFFECTUER DES CORRECTIONS CHIRURGICALES SUR LA COLONNE VERTEBRALE DE L'HOMME AU NIVEAU THORACIQUE ET LOMBAIRE, EN ABORDANT LA COLONNE VERTEBRALE LATERALEMENT ET INSTRUMENTS SERVANT A CES CORRECTIONS

Patent Applicant/Assignee:

MICHELSON Gary Karlin,

Inventor(s):

MICHELSON Gary Karlin

Patent and Priority Information (Country, Number, Date):

Patent: WO 9627321 A2 19960912

Application: WO 96US2378 19960226 (PCT/WO US9602378)

Priority Application: US 95394836 19950227

Designated States:

(Protection type is "patent" unless otherwise stated - for applications prior to 2004)

AL AM AT AU AZ BB BG BR BY CA CH CN CZ DE DK EE ES FI GB GE HU IS JP KE
KG KP KR KZ LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE
SG SI SK TJ TM TR TT UA UG UZ VN KE LS MW SD SZ UG AZ BY KG KZ MD RU TJ
TM AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA
GN ML MR NE SN TD TG

Main International Patent Class: A61B-017/56

Publication Language: English

Fulltext Word Count: 17625

English Abstract

An improved method and instrumentation for performing **spinal** surgery, including discectomy, interbody fusion and rigid internal fixation of the **spine**, from the lateral aspect of the **spine** is disclosed. The surgical procedure can be performed through a very small incision. The

instrumentation of the present invention, all of which is inserted from a lateral position into the **spine** in the preferred embodiment, comprises a guide pin, a distractor, an extended outer sleeve, an inner sleeve, an adjustable drill and an implant driver. The distractor of the present invention is driven into the disc for spacing apart and realigning the adjacent **vertebrae**. It further functions as an alignment rod for inserting the extended outer sleeve which is a hollow tubular member capable of maintaining said spacing and alignment of two adjacent **vertebrae** and defines a protected space through which subsequent instruments which may include, but are not limited to, a drill and a diameter reducing inner sleeve may be passed, as well as a **spinal** implant. The remainder of the surgical procedure consisting of the removal of **spinal** material across the disc, fusion, and rigid internal stabilization via the implant may all be performed via the closed space within the extended outer sleeve.

8/3,AB,IC/11 (Item 11 from file: 349)

DIALOG(R) File 349:PCT FULLTEXT

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00280646

APPARATUS AND METHOD OF INSERTING SPINAL IMPLANTS
APPAREIL ET PROCEDE D'INSERTION D'IMPLANTS SPINAUX

Patent Applicant/Assignee:

KARLIN TECHNOLOGY INC,

Inventor(s):

MICHELSON Gary Karlin

Patent and Priority Information (Country, Number, Date):

Patent: WO 9428824 A2 19941222

Application: WO 94US6345 19940609 (PCT/WO US9406345)

Priority Application: US 9374781 19930610

Designated States:

(Protection type is "patent" unless otherwise stated - for applications prior to 2004)

AU BB BG BR BY CA CN CZ FI HU JP KP KR KZ LK LV MG MN MW NO NZ PL RO RU SD SK UA UZ VN AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN ML MR NE SN TD TG

Main International Patent Class: A61B-017/56

International Patent Class: A61F-02:32; A61F-05:00; B67B-07:04

Publication Language: English

Fulltext Word Count: 20634

English Abstract

Apparatus and a method of inserting **spinal** implants is disclosed in which an intervertebral space is first distracted, a hollow sleeve having teeth at one end is then driven into the **vertebrae** adjacent that disc space. A drill is then passed through the hollow sleeve removing disc and bone in preparation for receiving the **spinal** implant which is then inserted through the sleeve.

9/TI/3 (Item 1 from file: 349)

DIALOG(R) File 349:(c) 2005 WIPO/Univentio. All rts. reserv.

SPINAL FUSION IMPLANT HAVING DEPLOYABLE BONE ENGAGING PROJECTIONS

9/TI/5 (Item 3 from file: 349)

DIALOG(R) File 349:(c) 2005 WIPO/Univentio. All rts. reserv.

TRANSLATERAL SPINAL IMPLANT

9/TI/6 (Item 4 from file: 349)
DIALOG(R)File 349:(c) 2005 WIPO/Univentio. All rts. reserv.
INTERSPACE IRRIGATOR

9/TI/7 (Item 5 from file: 349)
DIALOG(R)File 349:(c) 2005 WIPO/Univentio. All rts. reserv.
THREADED SPINAL IMPLANT

9/TI/8 (Item 1 from file: 348)
DIALOG(R)File 348:(c) 2005 European Patent Office. All rts. reserv.
Self-broaching, rotatable, push-in interbody spinal implant

9/TI/9 (Item 2 from file: 348)
DIALOG(R)File 348:(c) 2005 European Patent Office. All rts. reserv.
Arcuate ratcheted spinal fusion implant

9/TI/11 (Item 4 from file: 348)
DIALOG(R)File 348:(c) 2005 European Patent Office. All rts. reserv.
Translateral spinal distractor

9/TI/14 (Item 7 from file: 348)
DIALOG(R)File 348:(c) 2005 European Patent Office. All rts. reserv.
Cap for artificial spinal fusion implant

9/TI/15 (Item 8 from file: 348)
DIALOG(R)File 348:(c) 2005 European Patent Office. All rts. reserv.
Apparatus for compressively loading a spinal implant

9/TI/16 (Item 9 from file: 348)
DIALOG(R)File 348:(c) 2005 European Patent Office. All rts. reserv.
Apparatus for use in spinal surgery

9/TI/17 (Item 10 from file: 348)
DIALOG(R)File 348:(c) 2005 European Patent Office. All rts. reserv.
A spinal distractor

9/TI/19 (Item 12 from file: 348)
DIALOG(R)File 348:(c) 2005 European Patent Office. All rts. reserv.
SELF-BROACHING, ROTATABLE, PUSH-IN INTERBODY FUSION IMPLANT

9/TI/20 (Item 13 from file: 348)
DIALOG(R)File 348:(c) 2005 European Patent Office. All rts. reserv.
TRANSLATERAL SPINAL IMPLANT

9/TI/21 (Item 14 from file: 348)
DIALOG(R)File 348:(c) 2005 European Patent Office. All rts. reserv.
INSTRUMENTATION FOR THE SURGICAL CORRECTION OF HUMAN THORACIC AND LUMBAR SPINAL DISEASE FROM THE LATERAL ASPECT OF THE SPINE

9/TI/23 (Item 16 from file: 348)
DIALOG(R)File 348:(c) 2005 European Patent Office. All rts. reserv.
Interbody spinal fusion implants

9/TI/24 (Item 17 from file: 348)
DIALOG(R)File 348:(c) 2005 European Patent Office. All rts. reserv.
Apparatus for use in spinal surgery

9/TI/26 (Item 19 from file: 348)
DIALOG(R) File 348:(c) 2005 European Patent Office. All rts. reserv.
THREADED SPINAL IMPLANT

9/3,AB,IC/1 (Item 1 from file: 350)
DIALOG(R) File 350:Derwent WPIX
(c) 2005 Thomson Derwent. All rts. reserv.
015922650
WPI Acc No: 2004-080490/200408
XRAM Acc No: C04-033140
XRXPX Acc No: N04-064266

Guard for use in human spinal surgery across disc space between adjacent vertebral bodies, comprises body having, and disc space(s) penetrating extension

Patent Assignee: MICHELSON G K (MICH-I)

Inventor: MICHELSON G K

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20030199874	A1	20031023	US 2002125847	A	20020419	200408 B

Priority Applications (No Type Date): US 2002125847 A 20020419

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes
US 20030199874 A1 38 A61F-002/30

Abstract (Basic): US 20030199874 A1

Abstract (Basic):

NOVELTY - A guard for use in human **spinal** surgery across a disc space between two adjacent **vertebral** bodies, comprises a body having a leading end and an opposite trailing end, and a first and a second portion in pivotal relationship to one another; and disc space(s) penetrating extension.

DETAILED DESCRIPTION - A guard for use in human **spinal** surgery across a disc space between two adjacent **vertebral** bodies, comprises a body having a leading end and an opposite trailing end, and a first portion (104) and a second portion (106) in pivotal relationship to one another near the leading end between an open position and a closed position; and disc space(s) penetrating extension (110, 112) extending from the leading end of the body adapted for insertion at least in part into the disc space. The first and second portions define an opening that provides protected access to the disc space and the adjacent **vertebral** bodies. They have opposed interior portions adapted to guide through it a bone removal device sized to form an implantation space across the disc space and at least in part into the adjacent **vertebral** bodies. The extension has a first portion extending from the first portion of the body, having a contact surface adapted to bear against one of the adjacent endplates of the adjacent **vertebral** bodies. The extension has a second portion extending from the second portion of the body, having a contact surface adapted to bear against the other of the adjacent endplates of the adjacent **vertebral** bodies. The contact surfaces of the first and second portions are in pivotal relationship to one another from an insertion position to a deployed position to move the adjacent **vertebral** bodies apart upon movement of the first and second portions of the body from the open position to the closed position. **INDEPENDENT CLAIMS** are also included for:

(a) a guard as above in combination with a boric removal device for forming **through** the **guard** an implantation space across the disc

space;

(b) a guard as above in combination with an implant driver sized in part for passage through the opening for passing an implant through the guard and into the disc space;

(c) a guard as above in combination with a spinal implant adapted to be inserted in the implantation space formed through the guard;

(d) a guard as above in combination with a chemical substance adapted to inhibit scar formation; and

(e) a guard as above in combination with an antimicrobial material.

USE - For use in human spinal surgery across a disc space between two adjacent vertebral bodies (particularly posterior lumbar surgery).

ADVANTAGE - The inventive guard creates an interbody implantation space while providing for spinal lordosis. The guard is inserted and removed easily and is safely.

DESCRIPTION OF DRAWING(S) - The figure shows a cross-sectional view of the impaction cap.

First portion (104)

Second portion (106)

Windows (108)

Disc spaces penetrating extension (110, 112)

Impaction cap (124)

Contact surface (126)

pp; 38 DwgNo 18/45

International Patent Class (Main) : A61F-002/30

9/3,AB,IC/2 (Item 2 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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014902516

WPI Acc No: 2002-723222/200278

Related WPI Acc No: 2002-608554

XRAM Acc No: C02-204711

Guard useful in human spinal surgery across a disc space between two adjacent vertebral bodies comprises a body having a leading end and an opposite trailing end and a disc space penetrating extension extending from the leading end

Patent Assignee: MICHELSON G K (MICH-I)

Inventor: MICHELSON G K

Number of Countries: 101 Number of Patents: 011

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200269891	A2	20020912	WO 2002US6021	A	20020301	200278 B
US 20020123753	A1	20020905	US 2001272381	P	20010301	200278
			US 200285731	A	20020301	
US 20020128659	A1	20020912	US 2001272382	P	20010301	200278
			US 200285406	A	20020301	
US 20040082958	A1	20040429	US 2001272382	P	20010301	200429
			US 200285406	A	20020301	
			US 2003675820	A	20030930	
AU 2002247230	A1	20020919	AU 2002247230	A	20020301	200433
EP 1418851	A2	20040519	EP 2002715009	A	20020301	200433
			WO 2002US6021	A	20020301	
US 20040181233	A1	20040916	US 2001272382	P	20010301	200461
			US 200285406	A	20020301	
			US 2004809149	A	20040325	

JP 2004535215	W	20041125	JP 2002569070	A	20020301	200477
			WO 2002US6021	A	20020301	
US 20050043741	A1	20050224	US 2001272382	P	20010301	200515
			US 200285406	A	20020301	
			US 2004938381	A	20040911	
US 6896680	B2	20050524	US 2001272382	P	20010301	200535
			US 200285406	A	20020301	
US 20050216085	A1	20050929	US 2001266426	P	20010204	200564
			US 2001272381	P	20010301	
			US 2001277890	P	20010321	
			US 200261236	A	20020204	
			US 200285731	A	20020301	
			US 2005132140	A	20050518	

Priority Applications (No Type Date) : US 200285731 A 20020301; US 2001272381 P 20010301; US 2001272382 P 20010301; US 200285406 A 20020301; US 2003675820 A 20030930; US 2004809149 A 20040325; US 2004938381 A 20040911; US 2001266426 P 20010204; US 2001277890 P 20010321; US 200261236 A 20020204; US 2005132140 A 20050518

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 200269891 A2 E 69 A61K-000/00

Designated States (National) : AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW

Designated States (Regional) : AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZM ZW

US 20020123753 A1 A61B-017/58 Provisional application US 2001272381

US 20020128659 A1 A61B-017/58 Provisional application US 2001272382

US 20040082958 A1 A61B-017/58 Provisional application US 2001272382

Cont of application US 200285406

AU 2002247230 A1 A61K-000/00 Based on patent WO 200269891

EP 1418851 A2 E A61B-017/56 Based on patent WO 200269891

Designated States (Regional) : AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR

US 20040181233 A1 A61B-017/90 Provisional application US 2001272382
Div ex application US 200285406

JP 2004535215 W 99 A61B-017/58 Based on patent WO 200269891

US 20050043741 A1 A61B-017/58 Provisional application US 2001272382

Cont of application US 200285406

US 6896680 B2 A61B-017/56 Provisional application US 2001272382

US 20050216085 A1 A61F-002/44 Provisional application US 2001266426

Provisional application US 2001272381

Provisional application US 2001277890

CIP of application US 200261236

Div ex application US 200285731

Abstract (Basic) : WO 200269891 A2

Abstract (Basic) :

NOVELTY - A guard comprises a body having a leading end and an opposite trailing end. The body has two portions in pivotal relationship to one another between an open and a closed position. Each portion has opposed interior portions that have an opening for providing protected access to the disc space and the adjacent **vertebral** portions. The interior portions guide a bone removal device to form an implantation space across the disc space and at least in part into the **vertebral** bodies.

DETAILED DESCRIPTION - A guard comprises a body having a leading end and an opposite trailing end; and at least one disc penetration extension extending from the leading end of the body adapted for insertion at least in part into the disc space. The body has a first portion and a second portion proximate the leading end that are in pivotal relationship to one another between an open position and a closed position. The first and the second portions each have opposed interior portions that have an opening for providing protected access to the disc space and the adjacent **vertebral** bodies. The opposite interior portions are adapted to guide a bone removal device sized to form an implantation space across the disc space and at least in part into the adjacent **vertebral** bodies. The extension has a first portion extending from the first portion of the body that has a contact surface adapted to bear against one of the adjacent endplates of the adjacent **vertebral** bodies. The extension also has a second portion extending from the second portion of the body that has a contact surface adapted to bear against the other of the adjacent endplates of the adjacent **vertebral** bodies. The contact surfaces of the first and the second portions of the extension are in pivotal relationship to one another from an insertion position to a deployed position to move the adjacent **vertebral** bodies apart upon movement of the first and second portions of the body from the open position to the closed position or are rotatably articulating relative to one another between an insertion position and a deployed position to move the adjacent **vertebral** bodies apart.

USE - As an implantation in human **spinal** surgery across a disc space between two adjacent **vertebral** bodies of human **spine** (claimed).

ADVANTAGE - During the posterior lumbar surgery the device creates an interbody implantation space while providing for **spinal** lordosis and while being easily and safely inserted and as easily and safely removed. The device quickly, safely, effectively and accurately spaces apart and positions a pair of adjacent **vertebral** bodies to receive an implant, which is anything to be designed to be left in the body for an extended length of time, working upon properly positioned **vertebral** body end plate regions adjacent a disc space so as to remove bone to produce a receiving surface corresponding to an implant having upper and lower surfaces to be implanted between the adjacent **vertebrae**. The device permits the insertion of disc penetrating extensions of a guard into the disc space posteriorly in a first position that facilitates insertion and removal of the disc penetrating extensions to be removed into a second position that orients the adjacent **vertebral** bodies. The device works with linear insertion along a single axis and without removing the device during the disc space preparation. The device is capable of working upon both of the **vertebral** body end plate regions adjacent a disc space to produce opposed receiving surfaces in the adjacent end plates corresponding at least in part in size, shape and contour to an implant to be implanted with the exception of the height of the implant, which is greater than the distance between the opposed receiving surfaces that may be distracted or otherwise moved apart by insertion of the implant, and in doing so define the shape to the implantation space. The device protects the neurological structures such as nerve roots and dural sac proximate the implantation site while providing protected access to form an implantation space.

DESCRIPTION OF DRAWING(S) - The figure is a rear perspective view of a lumber segment of a **spine** with the dural sac retracted to the

left showing a partial discectomy and the guard with disc penetration extensions approaching the disc space between the adjacent **vertebral** bodies with the disc penetrating extensions in the first or insertion section.

first portion (104)
windows (108)
disc penetrating extensions (110, 112)
impaction cap (124)
pp; 69 DwgNo 38/45

International Patent Class (Main) : A61B-017/56; A61B-017/58; A61B-017/90;
A61F-002/44; A61K-000/00

International Patent Class (Additional) : A61B-017/16; A61L-027/00

9/3,AB,IC/4 (Item 2 from file: 349)
DIALOG(R) File 349:PCT FULLTEXT
(c) 2005 WIPO/Univentio. All rts. reserv.
00942641
RADIALLY EXPANDING INTERBODY SPINAL FUSION IMPLANTS AND INSTRUMENTATION FOR INSERTION THEREOF
IMPLANTS DE FUSION INTERVERTEBRAUX A DILATATION RADIALE ET INSTRUMENTS POUR LEUR INTRODUCTION

Patent Applicant/Inventor:

MICHELSON Gary K, 438 Sherman Canal, Venice, CA 90291, US, US
(Residence), US (Nationality)

Legal Representative:

FLESHNER Mark L (et al) (agent), FLESHNER & KIM, LLP, P.O. Box 221200,
Chantilly, VA 20153-1200, US,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200276335 A2-A3 20021003 (WO 0276335)

Application: WO 2002US6661 20020326 (PCT/WO US0206661)

Priority Application: US 2001279205 20010327; US 2001281714 20010404; US
2002105839 20020325

Designated States:

(Protection type is "patent" unless otherwise stated - for applications prior to 2004)

AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ
EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR
LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI
SK SL TJ TM TN TR TT TZ UA UG UZ VN YU ZA ZM ZW
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW
(EA) AM AZ BY KG KZ MD RU TJ TM

Main International Patent Class: A61F-002/44

Publication Language: English

Filing Language: English

Fulltext Word Count: 18312

English Abstract

Interbody spinal fusion implants (100) being at least in part radially expandable at one of the leading (104) or trailing (102) ends to expand both the height and at least a portion of the width of the implant (100). Instruments (300) and methods for inserting the implants (100) into an implantation space in the spine are disclosed.

9/3,AB,IC/10 (Item 3 from file: 348)

DIALOG (R) File 348:EUROPEAN PATENTS
(c) 2005 European Patent Office. All rts. reserv.
01853037

Instrumentation for inserting and deploying an expandable interbody spinal fusion implant

Instrumentarium zum Einführen und Positionieren eines expandierbaren Zwischenwirbel-Fusionsimplantates

Instrument permettant d'introduire et de déployer un implant de fusion intervertébral extensible

PATENT ASSIGNEE:

MICHELSON, Gary Karlin, (1189020), 438 Sherman Canal, Venice, CA 90291,
(US), (Applicant designated States: all)

INVENTOR:

Michelson, Gary Karlin , 13140 Boca De Canon Lane, Los Angeles, CA 90049
, (US)

LEGAL REPRESENTATIVE:

Viering, Jentschura & Partner (100646), Steinsdorfstrasse 6, 80538
München, (DE)

PATENT (CC, No, Kind, Date): EP 1504735 A2 050209 (Basic)
EP 1504735 A3 050216

APPLICATION (CC, No, Date): EP 2004025696 020204;

PRIORITY (CC, No, Date): US 266426 P 010204; US 277890 P 010321

DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI;
LU; MC; NL; PT; SE; TR

RELATED PARENT NUMBER(S) - PN (AN):

EP 1272130 (EP 2002703299)

INTERNATIONAL PATENT CLASS: A61F-002/46

ABSTRACT EP 1504735 A3

An apparatus for inserting an expandable spinal implant having an expander adapted to increase the height of the implant, said apparatus comprising:

an implant holder (1200) having a longitudinal axis, a passage (1212) along the longitudinal axis, and a distal end with an implant engagement area (1208) adapted to cooperatively engage the implant and remain engaged to the implant while the implant is expanded from an unexpanded position to an expanded position; and

an expander driver (1300) adapted to engage the expandable implant, said expander driver having a shaft (1302) adapted to pass through said passage of said implant holder, said shaft of said expander driver having a distal end adapted to engage the expander of the expandable implant.

ABSTRACT WORD COUNT: 122

NOTE:

Figure number on first page: 55

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200506	478
SPEC A	(English)	200506	19605
Total word count - document A			20083
Total word count - document B			0
Total word count - documents A + B			20083

9/3,AB,IC/18 (Item 11 from file: 348)
DIALOG(R) File 348:EUROPEAN PATENTS
(c) 2005 European Patent Office. All rts. reserv.
01267549

Guard having first and second passages for disc space surgery
Schutzvorrichtung mit zwei Durchfuhrungen zur Chirurgie des
Zwischenwirbelraums
Dispositif protecteur avec deux passages pour chirurgie de l'espace
intervertebrale

PATENT ASSIGNEE:

KARLIN TECHNOLOGY, INC., (1760130), 4929 Premiere Avenue, Lakewood,
California 90712, (US), (Proprietor designated states: all)

INVENTOR:

Michelson, Gary Karlin , 438 Sherman Canal, Venice, California 90291,
(US)

LEGAL REPRESENTATIVE:

Viering, Hans-Martin, Dipl.-Ing. et al (12202), Patentanwalte Viering &
Jentschura, Postfach 22 14 43, 80504 Munchen, (DE)

PATENT (CC, No, Kind, Date): EP 1092395 A2 010418 (Basic)
EP 1092395 A3 010516
EP 1092395 B1 040407

APPLICATION (CC, No, Date): EP 2000204830 940609;

PRIORITY (CC, No, Date): US 74781 930610

DESIGNATED STATES: AT; BE; CH; DE; DK; ES; FR; GB; GR; IE; IT; LI; LU; MC;
NL; PT; SE

EXTENDED DESIGNATED STATES: SI

RELATED PARENT NUMBER(S) - PN (AN):

EP 703757 (EP 94920704)

INTERNATIONAL PATENT CLASS: A61B-017/17

ABSTRACT EP 1092395 A3

A guard for use in performing surgery across a disc space between two adjacent vertebral bodies is described. The guard comprises an elongated body having a proximal end and an opposite distal end for placement against the adjacent vertebral bodies. The guard has a first passage through said elongated body for providing protected access to the disc space and the adjacent vertebral bodies for forming therein a first bore having a radius, and a second passage through said elongated body for providing protected access to the disc space and the adjacent vertebral bodies for forming therein a second bore having a radius. Each of the first and second passages have a central longitudinal axis, the longitudinal axes being spaced from each other greater than the sum of the radius of the first bore and the radius of the second bore.

ABSTRACT WORD COUNT: 141

NOTE: Figure number on first page: 7F

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200116	390
CLAIMS B	(English)	200415	576
CLAIMS B	(German)	200415	530
CLAIMS B	(French)	200415	625
SPEC A	(English)	200116	16597
SPEC B	(English)	200415	14679
Total word count - document A			16989
Total word count - document B			16410
Total word count - documents A + B			33399

File 155: MEDLINE (R) 1951-2005/Nov 11
(c) format only 2005 Dialog
File 5:Biosis Previews(R) 1969-2005/Nov W1
(c) 2005 BIOSIS
File 73:EMBASE 1974-2005/Nov 15
(c) 2005 Elsevier Science B.V.
File 34:SciSearch(R) Cited Ref Sci 1990-2005/Nov W1
(c) 2005 Inst for Sci Info
File 434:SciSearch(R) Cited Ref Sci 1974-1989/Dec
(c) 1998 Inst for Sci Info
Set Items Description
S1 268 AU='MICHELSON G' OR AU='MICHELSON G.'
S2 82 AU='MICHELSON G K' OR AU='MICHELSON GARY K' OR AU='MICHELS-
ON GARY KARLIN'
S3 11525783 SPINE OR SPINAL OR VERTEBRA?
S4 2755662 IMPLANT? OR GRAFT? OR TRANSPLANT?
S5 525491 GUARD OR TUBE OR TUBULAR OR TUBELIKE OR PIPE OR PIPET
S6 122 S1:S2 AND S3
S7 59 S4 AND S6
S8 3 S5 AND S7
S9 3 RD (unique items)
S10 3 S6 AND S5
S11 0 S10 NOT S8
S12 56 S7 NOT S8
S13 36 RD (unique items)
S14 36 Sort S13/ALL/PY,A

9/7/1 (Item 1 from file: 5)
DIALOG(R) File 5:Biosis Previews(R)
(c) 2005 BIOSIS. All rts. reserv.
0014775997 BIOSIS NO.: 200400156754
Spinal interspace shaper
AUTHOR: Michelson Gary K (Reprint
JOURNAL: Official Gazette of the United States Patent and Trademark Office
Patents 1279 (3): Feb. 17, 2004 2004
MEDIUM: e-file
ISSN: 0098-1133 (ISSN print)
DOCUMENT TYPE: Patent
RECORD TYPE: Abstract
LANGUAGE: English
ABSTRACT: A device and method for use in a **vertebral** spine to prepare a space between adjacent **vertebral** bodies to receive an **implant**. The device includes a shaft, and a mounting member at one end of the shaft. A working end is mounted on the mounting member and is coupled to a drive mechanism adjacent to the working end. The drive mechanism is operable to move the upper and lower cutters of the working end to create surfaces having predetermined contours in the end plate region of the adjacent **vertebral** bodies. A **guard** provides protected access to the disc space and the adjacent **vertebral** bodies for the working end of the bone removal device through a passageway.

9/7/2 (Item 2 from file: 5)
DIALOG(R) File 5:Biosis Previews(R)
(c) 2005 BIOSIS. All rts. reserv.
0013919390 BIOSIS NO.: 200200512901

Method for inserting spinal implants and for securing a guard to the spine

AUTHOR: **Michelson Gary Karlin**

JOURNAL: Official Gazette of the United States Patent and Trademark Office
Patents 1261 (3): Aug. 20, 2002 2002

MEDIUM: e-file

ISSN: 0098-1133

DOCUMENT TYPE: Patent

RECORD TYPE: Abstract

LANGUAGE: English

ABSTRACT: Apparatus and a method of inserting **spinal implants** is disclosed in which an intervertebral space is first distracted, a hollow sleeve having teeth at one end is then driven into the **vertebrae** adjacent that disc space. A drill is then passed through the hollow sleeve removing disc and bone in preparation for receiving the **spinal implant** which is then inserted through the sleeve.

9/7/3 (Item 3 from file: 5)

DIALOG(R) File 5:Biosis Previews(R)

(c) 2005 BIOSIS. All rts. reserv.

0013313636 BIOSIS NO.: 200100485475

Instrumentation and method for creating an intervertebral space for receiving an implant

AUTHOR: **Michelson Gary K**

JOURNAL: Official Gazette of the United States Patent and Trademark Office
Patents 1246 (1): May 1, 2001 2001

MEDIUM: e-file

ISSN: 0098-1133

DOCUMENT TYPE: Patent

RECORD TYPE: Abstract

LANGUAGE: English

ABSTRACT: A surgical instrument set for use in **spinal** surgery for forming a substantially quadrilateral space in the **spine** for **implanting** a **spinal implant** at least in part into and at least in part across a disc space between adjacent **vertebral** bodies and methods of use are disclosed. The instrument set includes an extended **guard** for providing protected access to the disc space and the adjacent surfaces of the adjacent **vertebral** bodies, a guide insertable into the **guard**, and a bone removal device insertable into said guide.

14/7/2 (Item 2 from file: 5)

DIALOG(R) File 5:Biosis Previews(R)

(c) 2005 BIOSIS. All rts. reserv.

0013443690 BIOSIS NO.: 200200037201

Apparatus and method of inserting spinal implants

AUTHOR: **Michelson G K**

AUTHOR ADDRESS: 438 Sherman Canal, Venice, Calif. 90291, USA**USA

JOURNAL: Official Gazette of the United States Patent and Trademark Office
Patents 1185 (2): p1055-1056 April 9, 1996 1996

MEDIUM: print

ISSN: 0098-1133

DOCUMENT TYPE: Patent

RECORD TYPE: Citation

LANGUAGE: English

1 14/7/3 (Item 3 from file: 5)
DIALOG(R) File 5:Biosis Previews(R)
(c) 2005 BIOSIS. All rts. reserv.
0013531035 BIOSIS NO.: 200200124546
Apparatus for inserting spinal implants
AUTHOR: **Michelson G K**
AUTHOR ADDRESS: 438 Sherman Canal, Venice, Calif. 90291, USA**USA
JOURNAL: Official Gazette of the United States Patent and Trademark Office
Patents 1213 (4): p3605 Aug. 25, 1998 1998
MEDIUM: print
ISSN: 0098-1133
DOCUMENT TYPE: Patent
RECORD TYPE: Citation
LANGUAGE: English

14/7/4 (Item 4 from file: 5)
DIALOG(R) File 5:Biosis Previews(R)
(c) 2005 BIOSIS. All rts. reserv.
0013526871 BIOSIS NO.: 200200120382
**Methods and instrumentation for the surgical correction of human thoracic
and lumbar spinal disease from the antero-lateral aspect of the spine**
AUTHOR: **Michelson G K**
AUTHOR ADDRESS: 438 Sherman Canal, Venice, Calif. 90291, USA**USA
JOURNAL: Official Gazette of the United States Patent and Trademark Office
Patents 1211 (5): p4826 June 30, 1998 1998
MEDIUM: print
ISSN: 0098-1133
DOCUMENT TYPE: Patent
RECORD TYPE: Citation
LANGUAGE: English

14/7/5 (Item 5 from file: 5)
DIALOG(R) File 5:Biosis Previews(R)
(c) 2005 BIOSIS. All rts. reserv.
0013513966 BIOSIS NO.: 200200107477
Method for inserting spinal implants
AUTHOR: **Michelson G K**
AUTHOR ADDRESS: 438 Sherman Canal, Venice, Calif. 90291, USA**USA
JOURNAL: Official Gazette of the United States Patent and Trademark Office
Patents 1209 (3): p2203-2204 April 21, 1998 1998
MEDIUM: print
ISSN: 0098-1133
DOCUMENT TYPE: Patent
RECORD TYPE: Citation
LANGUAGE: English

14/7/8 (Item 8 from file: 5)
DIALOG(R) File 5:Biosis Previews(R)
(c) 2005 BIOSIS. All rts. reserv.
0013041811 BIOSIS NO.: 200100213650
Apparatus instrumentation, and method for spinal fixation
AUTHOR: **Michelson Gary Karlin**
JOURNAL: Official Gazette of the United States Patent and Trademark Office

Patents 1238 (3): Sep. 19, 2000 2000

MEDIUM: e-file

ISSN: 0098-1133

DOCUMENT TYPE: Patent

RECORD TYPE: Abstract

LANGUAGE: English

ABSTRACT: A **spinal** fixation device for stabilizing one or more segments of the human **spine** and for preventing the dislodgement of intervertebral **spinal** fusion **implants**, which remains permanently fixated once applied. The **spinal** fixation device of the present invention comprises of a staple member made of material appropriate for human surgical **implantation** which is of sufficient length to span the disc space between two adjacent **vertebrae** and to engage, via essentially perpendicular extending projections, the **vertebrae** adjacent to that disc space. A portion of the staple of the **spinal** fixation device interdigitates with an already **implanted** intervertebral **spinal** fusion **implant** which itself spans the disc space to engage the adjacent **vertebrae**, and the **spinal** fixation device is bound to the **spinal** fusion **implant** by a locking means. The **spinal** fixation device of the present invention is of great utility in restraining the **vertebrae** adjacent to the **spinal** fusion **implant** from moving apart as the **spine** is extended and also serves as an anchor for a multi-segmental **spinal** alignment means for aligning more than one segment of the **spine**.

14/7/9 (Item 9 from file: 5)

DIALOG(R) File 5:Biosis Previews(R)

(c) 2005 BIOSIS. All rts. reserv.

0012973711 BIOSIS NO.: 200100145550

Method of inserting and preloading spinal implants

AUTHOR: Michelson Gary Karlin

JOURNAL: Official Gazette of the United States Patent and Trademark Office

Patents 1235 (4): June 27, 2000 2000

MEDIUM: e-file

ISSN: 0098-1133

DOCUMENT TYPE: Patent

RECORD TYPE: Abstract

LANGUAGE: English

ABSTRACT: Apparatus and a method of inserting **spinal implants** is disclosed in which an intervertebral space is first distracted, a hollow sleeve having teeth at one end is then driven into the **vertebrae** adjacent that disc space. A drill is then passed through the hollow sleeve removing disc and bone in preparation for receiving the **spinal implant** which is then inserted through the sleeve. Apparatus and a method of inserting **spinal implants** is disclosed in which an intervertebral space is first distracted to restore the normal angular relationship of the **vertebrae** adjacent to that disc space. An extended outer sleeve having extended portions capable of maintaining the **vertebrae** distracted in their normal angular relationship is then driven into the **vertebrae** adjacent that disc space. A drill is then passed through the hollow sleeve removing disc and bone in preparation for receiving the **spinal implant** which is then inserted through the sleeve.

14/7/11 (Item 11 from file: 5)

DIALOG(R) File 5:Biosis Previews(R)

(c) 2005 BIOSIS. All rts. reserv.

0013274844 BIOSIS NO.: 200100446683
Method for inserting frusto-conical interbody spinal fusion implants
AUTHOR: **Michelson Gary Karlin**
JOURNAL: Official Gazette of the United States Patent and Trademark Office
Patents 1245 (1): Apr. 3, 2001 2001
MEDIUM: e-file
ISSN: 0098-1133
DOCUMENT TYPE: Patent
RECORD TYPE: Abstract
LANGUAGE: English
ABSTRACT: The present invention is directed to a method of inserting a variety of interbody spinal fusion implants having at least a partially frusto-conical configuration and the instrumentation and methods by which the implants .

14/7/13 (Item 13 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)
(c) 2005 BIOSIS. All rts. reserv.
0013206181 BIOSIS NO.: 200100378020
Anterior spinal instrumentation and method for implantation and revision
AUTHOR: **Michelson Gary K (Reprint); Boyd Lawrence M**
AUTHOR ADDRESS: 438 Sherman Canal, Venice, CA, 90281, USA**USA
JOURNAL: Official Gazette of the United States Patent and Trademark Office
Patents 1243 (3): Feb. 20, 2001 2001
MEDIUM: e-file
ISSN: 0098-1133
DOCUMENT TYPE: Patent
RECORD TYPE: Abstract
LANGUAGE: English
ABSTRACT: A system and method for anterior fixation of the spine utilizes a cylindrical implant engaged in the a intradiscal space at the cephalad and caudal ends of the construct. The implants are cylindrical fusion devices (10) filled with bone material to promote bone ingrowth and fusion of the disc space. An attachment member (40) is connected to each of the fusion devices (10) and bone screws (30) having similar attachment members (33) are engaged in the vertebral bodies of the intermediate vertebrae . A spinal rod (50) is connected to each of the attachment members using an eyebolt assembly (53, 54, 55). In a further inventive method, a revision of the construct is achieved by removing the fusion devices. Each fusion device is engaged by an elongated guide member (62) over which a cylindrical trephine (70) is advanced. The trephine (70) has an inner diameter larger than the diameter of the fusion implant and includes cutting teeth (72) for extracting a core (84) of bone material around the fusion implant . The trephine (70) and guide member (62) are removed along with the bone core (84) containing the fusion implant (10). The trephine (70) is also used to extract a bone dowel from a solid bone mass to be inserted into the space left by the removed bone core (84).

14/7/18 (Item 18 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)
(c) 2005 BIOSIS. All rts. reserv.
0013951359 BIOSIS NO.: 200200544870
Milling instrumentation and method for preparing a space between adjacent

vertebral bodies

AUTHOR: **Michelson Gary K**

JOURNAL: Official Gazette of the United States Patent and Trademark Office
Patents 1261 (4): Aug. 27, 2002 2002

MEDIUM: e-file

ISSN: 0098-1133

DOCUMENT TYPE: Patent

RECORD TYPE: Abstract

LANGUAGE: English

ABSTRACT: An apparatus and method for placing adjacent **vertebrae** at a fixed distance and angular relationship relative to each other, fixing said **vertebrae** in said position by use of a milling block engaging each of said adjacent **vertebrae** and then using a milling means, the depth, length and excursion of which from side to side are controlled by said apparatus to machine out a defined thickness of bone and a space of defined length, height, width and shape in preparation for receiving an interbody **spinal implant** or **graft** of known size and configuration are disclosed.

14/7/25 (Item 25 from file: 5)

DIALOG(R) File 5:Biosis Previews(R)

(c) 2005 BIOSIS. All rts. reserv.

0014238143 BIOSIS NO.: 200300196862

Device and method for preparing a space between adjacent vertebrae to receive an insert

AUTHOR: **Michelson Gary K** (Reprint)

JOURNAL: Official Gazette of the United States Patent and Trademark Office

Patents 1268 (4): Mar. 25, 2003 2003

MEDIUM: e-file

ISSN: 0098-1133 (ISSN print)

DOCUMENT TYPE: Patent

RECORD TYPE: Abstract

LANGUAGE: English

ABSTRACT: A device and method for use in a human **spine** to prepare a space between adjacent **vertebral** bodies and into the **vertebral** end plates to receive an **implantable** insert. The device includes a handle, a shaft, and a mounting member at one end of the shaft. An abrading element is mounted on the mounting member and is coupled to a drive mechanism. The drive mechanism is operable to move the abrading element in at least one degree of freedom to create surfaces having predetermined contours in the end plates of the adjacent **vertebral** bodies.

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Apparatus for use in inserting spinal implants

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ABSTRACT: Apparatus and a method of inserting **spinal implants** is disclosed in which an intervertebral space is first distracted, a hollow sleeve having teeth at one end is then driven into the **vertebrae** adjacent that disc space. A drill is then passed through the hollow sleeve removing disc and bone in preparation for receiving the **spinal implant** which is then inserted through the sleeve. Apparatus and a method of inserting **spinal implants** is disclosed in which an intervertebral space is first distracted to restore the normal angular relationship of the **vertebrae** adjacent to that disc space. An extended outer sleeve having extended portions capable of maintaining the **vertebrae** distracted in their normal angular relationship is then driven into the **vertebrae** adjacent that disc space. A drill is then passed through the hollow sleeve removing disc and bone in preparation for receiving the **spinal implant** which is then inserted through the sleeve.